DOCUMENT RESUME

ED 169 270 CE 020 097

AUTHOR Khan, Shirley; And Others
TITLE Hospital Workers. Grade 5. One in a Series of Career Development Curriculum Units for the Elementary Classroom. (Second Edition).
INSTITUTION Coloma Community Schools, Mich.
SPONS AGENCY Michigan State Dept. of Education, Lansing.
PUB DATE 75
CONTRACT 300-77-0303
NOTE 192p.; For related documents see ED 162 102 and CE 020 072-101
AVAILABLE FROM Project CDCC Clearinghouse, P.O. Box 218, Coloma Community Schools, Coloma, Michigan 49038 ($2.25; set of 27 units, $55.00)

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS *Behavioral Objectives; *Career Awareness; *Career Development; *Career Education; Grade 5; *Hospital Personnel; *Instructional Materials; *Learning Activities; Occupational Information; Validated Programs
IDENTIFIERS Career Development Centered Curriculum Project; Education Amendments 1974; Michigan (Coloma)

ABSTRACT

Focusing on the occupational clusters of technology and research, clerical, personal and product service, and health, this unit entitled "Hospital Workers" is one of four grade 5 units which are part of a total set of twenty-seven career development curriculum units for grades K-6. This unit is organized into four sections. Section 1 identifies one career development-centered curriculum (CDCC) element (life-role understanding), two career development themes (e.g., the student will understand the characteristics of life-roles and their functions), four unit goals (e.g., the student will become more aware of proper actions in an emergency situation), and five performance objectives (e.g., given a description of eight situations suggesting common emergency problems, the student will identify, with at least 80% accuracy, the correct emergency procedure for each). Also included in Section I are evaluation procedures for pre- and post-assessments, five student evaluation sheets, answer keys, and evaluation tabulation forms. Section II describes teaching strategies for seven unit subtopics (capsules) and includes suggested resources for teaching each one. Capsule titles include first aid, nurses, and professional services departments. Section III contains thirty-five teacher reference sheets and section IV contains thirty-two student activity sheets. (JH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED169270

Suggested for
Grade 5

HOSPITAL WORKERS

one in a series
of

CAREER DEVELOPMENT CURRICULUM UNITS
for the
Elementary Classroom

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

A. Lee Downey

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CDCC Project
ESEA Title III
Coloma Community Schools
P.O. Box 218
Coloma, Michigan 49038

CE 020 087

HOSPITAL WORKERS

Grade 5

(Second Edition)

one in a series
of

CAREER DEVELOPMENT CURRICULUM UNITS

for the
ELEMENTARY CLASSROOM

Developed by:
  Shirley Khan
  Mary Klug
  Randy Kniebes
  Marjorie Krell
  Bob Leonard
  Wes Platt
  Jane VanDerveer
  Barb Vegrer
  Joe Wettstein
    5th Grade Teachers
  Joyce Tutton, Elementary Project Coordinator

Edited by:
  Charlotte Groff

CAREER DEVELOPMENT CENTERED CURRICULUM PROJECT

ESEA TITLE III

Gerald Geik, Project Director

William Barrett, Superintendent

The contents of this document were developed pursuant to a grant under Title III of the Elementary and Secondary Education Act administered through the Experimental and Demonstration Centers Program, Michigan Department of Education. However, the opinions expressed herein do not necessarily reflect the position of policy of the Michigan Department of Education.

© Copyright 1975, Coloma Community Schools, P. O. Box 218, Coloma, Michigan.

FOREWORD

The series "Career Development Curriculum Units for the Elementary Classroom" represents the outcome of three and one-half years of effort on the part of many individuals within Coloma Community Schools. The work was completed under an ESEA Title III project entitled "Career Development Centered Curriculum" (CDCC) in cooperation with the Michigan Department of Education. The series constitutes a response to the ever-increasing need to augment and enhance each students' career development process.

The series of twenty-seven curriculum units consists of a logical, sequenced arrangement of learning activities based on development tasks and content consistent with accepted career development theory and practice.

The approach is one of integrating career awareness with existing subject matter as well as building into the curriculum a sound approach to self-awareness. Learning activities are linked to performance objectives for which there are evaluation techniques; making it possible to assess impact on learners.

Gerald Geik
Project Director

ELEMENTARY CAREER DEVELOPMENT: THE UNIT APPROACH

An Elementary Career Development Curriculum Unit is a group of interdisciplinary learning experiences for which there are expected outcomes identified in the form of performance objective. Because they are interdisciplinary, they include learning and practice in math, communication arts, science and social studies as vehicles for conveying the career development aspects of an individual's growth. Learning activities are built around either self-awareness or occupational cluster topics.

Developed by teachers or counselors, they are based on CDCC themes and elements, aligned with career developmental tasks.

They include a variety of teaching strategies in the form of role-playing, discussions, work sheets, field trips, use of role models, use of A.V. materials, etc. They include evaluation strategies, (both observational and paper and pencil), based on unit performance objectives. Time of implementation for each unit is approximately two instruction hours per day for a period of two to three weeks. One unit is taught during each nine-week grading period at each grade level.

A single unit is a small part of a total sequence of learning experiences that all together contribute to the individual's career development process.

UNIT TITLES IN THE SERIES "CAREER DEVELOPMENT CURRICULUM UNITS FOR THE ELEMENTARY CLASSROOM"

	UNIT TITLE	FOCUS
K	ME	Self Awareness: Physical Self
	INSIDE ME	Self Awareness: Emotional Self
	SCHOOL WORKERS	Occupational Clusters: Public Service, Clerical
	COMMUNITY HELPERS	Occupational Clusters: Public Service, Natural Resources, Health
1	FRIENDSHIP	Self Awareness: Social Self
	A FEW OF OUR FAVORITE THINGS	Occupational Clusters: Arts, Technology, Research, Personal & Product Services
	TELEPHONE WORKERS	Occupational Clusters: Transportation, & Communicatio
	THE FOOD STORE	Occupation Clusters: Business & Sales

Career Development Centered Curriculum Project
ESEA Title III
Coloma Community Schools
Coloma, Michigan

	UNIT TITLE	FOCUS
2	MY ENVIRONMENT	Self Awareness: Environmental & Physical Self
	BAKING INDUSTRY	Occupational Clusters: Natural Resources, Manufacturing
	FIREFIGHTERS	Occupational Cluster: Public Service
	PET INDUSTRY	Occupational Clusters: Public Service, Personal & Product Services
3	DAIRY INDUSTRY	Occupational Clusters: Health, Manufacturing
	RESPONDING BEHAVIOR	Self Awareness: Emotional & Social Self
	RESTAURANT INDUSTRY	Occupational Clusters: Health, Hospitality and Recreation
	AIRLINE WORKERS	Occupational Clusters: Health, Hospitality, Recreation Clerical, Technology & Research
4	FORESTRY	Occupational Cluster: Natural Resources
	BEST FOOT FORWARD	Self Awareness: Self Appraisal, Goal Setting and Social Self
	POSTAL WORKERS	Occupational Cluster: Public Service
	POLICE WORKERS	Occupational Clusters: Clerical, Public Service
5	OUR GROUP AND ME	Self Awareness: Group Roles & Social Self
	MANUFACTURING	Occupational Clusters: Clerical, Business, Sales & Trades, Manufacturing
	HOSPITAL WORKERS	Occupational Clusters: Technology & Research, Clerical, Personal & Product Service & Health
	MY FEELINGS ARE ME	Self Awareness: Emotional Self
6	GOING ABROAD, ANYONE?	Occupational Clusters: Transportation & Communication, Hospitality & Recreation
	ME, MYSELF AND I	Self Awareness: Physical, Emotional, Social & Intellectual Self
	T.V. INDUSTRY	Occupational Clusters: Business, Sales & Trades, Arts and Entertainment, Transportation & Communication, Technology and Research

Career Development Centered Curriculum Project
ESEA Title III
Coloma Community Schools
Coloma, Michigan

THE CDCC PROGRAM (K-6)

One dimension of human growth and development is the career development process. In this process each person progresses through a sequence of developmental tasks that make it possible for that person to become a self-fulfilled individual. This is a life-long process involving experiences and decisions that sequentially build on each other. When taken cumulatively, they contribute to the formulation of a realistic self-concept that can be expressed through one's occupational, leisure, family, and civic life-roles.

The career development process can be augmented by building career development curriculum units into the already existing curriculum. In developing the units, three things were considered: 1) career development themes, 2) career development tasks through which individuals normally progress, and 3) subject matter in the already existing curricula. All three of these were brought into focus when generating component goals and objectives and developing learning activities.

The curriculum units altogether constitute the sequential placement of career development activities into the existing K-6 curriculum. Career Development Themes define the *scope* and Career Development Tasks define the *sequence* of the CDCC program. To signify the relationship of the elementary program to the total, elements, themes, developmental tasks and occupational clustering system are presented.

CDCC PROJECT ELEMENTS AND THEMES

CDCC ELEMENT I -- Life-Role Understanding (occupational, avocational, family, civic)

Theme 1.1 The student will understand life-role activity as self-enhancing. (psychological, economic, life-style implications)

Theme 1.2 The student will understand life-role activity as societal-contributing. (economic, societal-need implications)

Theme 1.3 The student will understand the relationship of education to life roles.

Theme 1.4 The student will understand the desirable attributes of individuals in life roles.

Theme 1.5 The student will understand the characteristics of life-roles and their functions.

Theme 1.6 The student will understand the relationship of life-role changeableness to individual cope-ability.

CDCC ELEMENT II -- Decision-Making Skill Development and Utilization

Theme 2.1 The student will set personally relevant goals as part of decision-making.

Theme 2.2 The student will identify and use information about self and life roles as part of decision-making.

Theme 2.3 The student will understand decision-making as identifying alternatives, selecting the alternative most consistent with goals, and taking steps to implement a course of action.

CDCC ELEMENT III -- Realistic Self Concept Formulation

Theme 3.1 The student will understand his or her own uniqueness as a result of personal learning, growth, and maturation.

Theme 3.2 The student will understand the relationship of social and education forces to his or her individual development.

Theme 3.3 The student will understand the relationship of self-knowledge to a value system unique to him or her.

Theme 3.4 The student will understand the relationship of his or her interests, aptitudes and achievements to career goal realization.

CAREER DEVELOPMENT TASKS*
FOR
LIFE-ROLE UNDERSTANDING, C.D.C.C. ELEMENT I

K-3	4-6	7-9	10-12
Occupational values and attitudes are formed and are used as a basis for judgment. Children establish relationships between experience and action, manipulate language and symbols primarily by imitating models and accommodating their behavior to the behavior observed in others with whom they identify, i.e., people in various life-roles. (Focus is generally on home, school and neighborhood.) Children are acquiring respect for particular people and their life-roles, especially for the work they do. (Adults must foster positive attitudes toward all kinds of life-roles.) Children can distinguish between occupations primarily on the basis of tool and uniform clues. They develop interpersonal skills that permit them to gain acceptance by peers in parallel play and sharing.	Children continue to face the same kinds of tasks but with more complexity. They enter the phase of conceptual learning. They develop the ability to conceive the function of life-roles. They generalize (abstract) their respect for specific people and their life-roles to an appreciation of all people everywhere. As they learn the value of mankind, they learn to value themselves. They increase their knowledge of life-roles by expanding experiences beyond home, school and neighborhood. As they begin to understand the concept of work and value it as an institution, they develop self-direction--this helps build a positive self-concept. They are refining interpersonal skills to build confidence in their ability to successfully interact with peers in more complex types of group activities.	Youth develop the capacity to operate on hypothetical propositions--they have learned to think more logically and abstractly. They are better able to cope with cultural and environmental demands. They can make internal interpretations of environmental transactions and generalize these to other situations. Concepts which have been learned previously are used to build further concepts. As they learn about life-roles and life-role settings, they determine the subtle factors involved in life-role satisfaction and rewards--looking for what they personally find necessary, important and valuable. (They should acquire knowledge about life-roles and curricula to help them think realistically about their futures.)	Youth expand and refine tasks of earlier levels. They determine to a large extent, the course of their own futures. The individual must define the level of his or her educational aspiration and arrange training accordingly. Concepts which the individual holds about self and life-roles become internalized to the point where they form the basis for particular generalizations concerning his or her career life identity. The individual must acquire skills, responsibility, and confidence in life-roles through actual experiences. Through these experiences, individuals test their self concept.

---

*After Ginzberg (1951), Havighurst (1964), Super (1969), and Tennyson (1970).

CAREER DEVELOPMENTAL TASKS*
FOR
DECISION-MAKING SKILL DEVELOPMENT, C.D.C.C. ELEMENT II

K-3	4-6	7-9	10-12
Fantasy period: Children make unrealistic choices based on dreams and wishes. The individual does not wonder whether he or she has the appropriate abilities to do what he or she wants to do. (Teachers and parents should readily accept unrealistic statements.)	Late fantasy period, early tentative period. (During early tentative period, children should be helped to see that there are still a number of years before career plans must be set.)	Tentative period: The individual begins to recognize the problem of career choice; decisions are tentative but more realistic. The individual is continuously obtaining new information and experience, revising previous choices and making new choices. (Gradually the youngster should be helped to explore the difference between fantasy and reality in making decisions.) The individual begins to formulate a career hypothesis (tentative) --a narrowing process of identifying interests, values, capacities, and opportunities. Making successful decisions strengthens the individual's self-concept.	Late tentative period, realistic period: The individual's considerations become much more practical as well as important. The decision-making process must become personalized. Because the environment is constantly changing, a major real-life problem is how to plan for change--a realistic decision-making process for the individual requiring commitment with tentativeness. As the individual expresses his or her self-concept through complex real-life decisions, he or she becomes able to utilize personal attributes to influence the nature of future choices rather than merely to adapt to external pressures. Learning to make decisions and accept responsibility for them helps the individual develop responsible independence and individuality. The individual's career hypothesis is reformed to make adjustments for changing interests, abilities, values, and increased knowledge of life-roles.

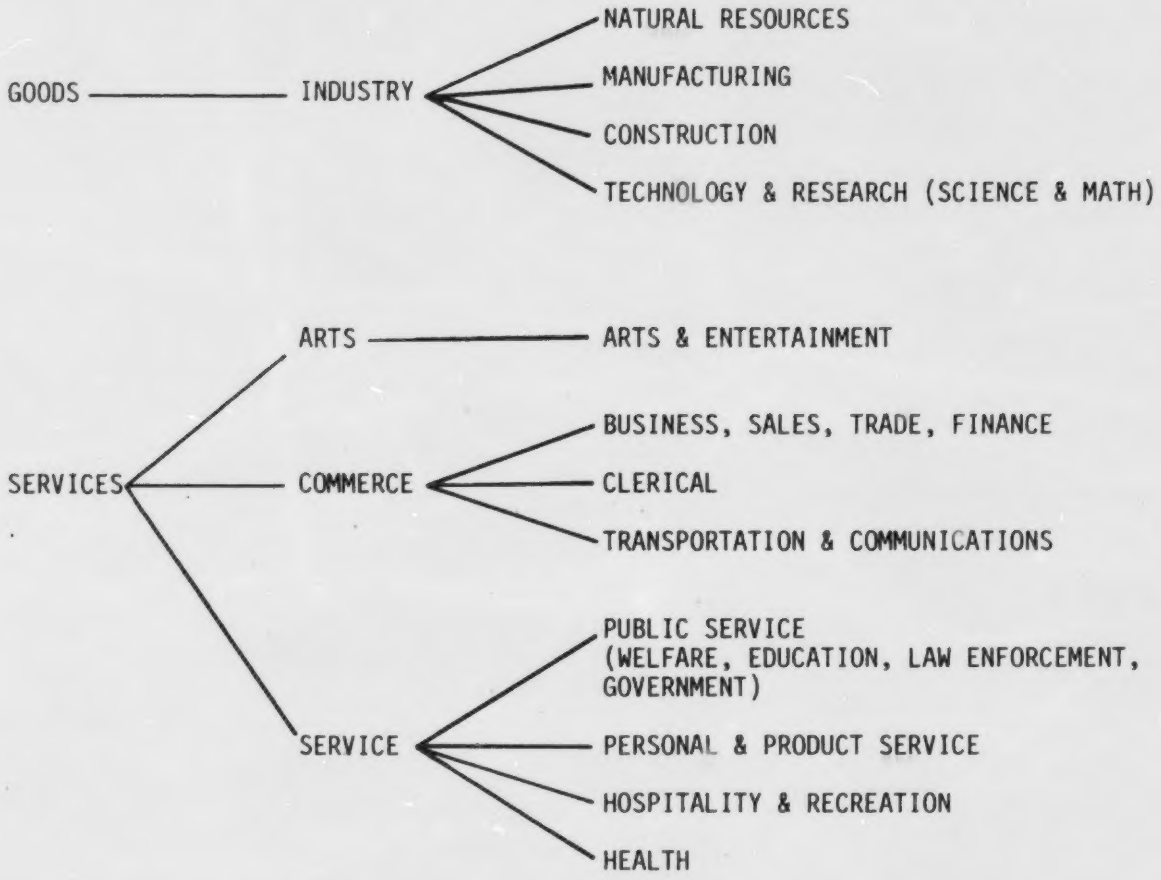
*After Ginzberg (1951), Havighurst (1964), Super (1969), and Tennyson (1970).

CAREER DEVELOPMENT TASKS* FOR REALISTIC SELF CONCEPT FORMULATION, C.D.C.C. ELEMENT III

K-3	4-6	7-9	10-12
Children become aware of themselves and their environment and differentiate between them. They are acquiring a sense of some control over their own course of events--a sense of agency. (The child must have successes to build self-confidence thus building tolerance for others). Children begin developing interpersonal skills that permit them to be socially acceptable to their peers. The child realizes that people are not objects and recognizes their humanness. (They need an atmosphere where mistakes are expected and each is respected as an individual.)	The individual is concerned about what he or she can do. The individual should be developing a positive self-concept. Each child develops his or her interest and ability to accomplish tasks. (Children need opportunities to work and reinforcement for it.) Individuals should be building social self confidence in themselves to relate successfully to others. (They need a continued atmosphere of mistakes being expected and tolerated and each is accepted and respected as an individual.)	The individual undergoes great changes physically, intellectually and socially. Each explores his or her self attributes while clarifying the self-concept--each individual reinterprets the self-concept developed earlier in terms of the 'new self'. Each individual must come to accept himself or herself as an entirely different person outwardly, and to some extent inwardly. The single most important task for the individual during this state is to achieve a sense of personal identity.	The individual is engaged in reality testing of the self-concept--each is checking his or her perceptions of abilities, aptitude and other personal resources against external reality. The individual is becoming aware of a preferred life style as related to self-concept.

*After Ginzberg (1951), Havighurst (1964), Super (1969), and Tennyson (1970).

C.D.C.C. OCCUPATIONAL CLUSTERING SYSTEM


NATURAL RESOURCES
GOODS
INDUSTRY
MANUFACTURING
CONSTRUCTION
TECHNOLOGY & RESEARCH (SCIENCE & MATH)
ARTS
ARTS & ENTERTAINMENT
BUSINESS, SALES, TRADE, FINANCE
SERVICES
COMMERCE
CLERICAL
TRANSPORTATION & COMMUNICATIONS
PUBLIC SERVICE
(WELFARE, EDUCATION, LAW ENFORCEMENT, GOVERNMENT)
SERVICE
PERSONAL & PRODUCT SERVICE
HOSPITALITY & RECREATION
HEALTH

USING THE UNIT

SECTION I	Identifies CDCC Elements, Themes, Unit Goals and Performance Objectives to be affected by teaching the unit to a group of learners; includes evaluation design and/or test items for determining impact on learners.
SECTION II	Describes teaching strategies by unit subtopics (capsules) and includes suggested resources for teaching each capsule.
SECTION III	Contains reference information for teachers from which a background can be built to effectively conduct the learning activities.
SECTION IV	Contains activity sheets for student's use.

"Hospital Workers"
Grade 5

Unit Rationale

The primary intent of this unit is to assist the students in discovering a relationship between their current school experiences and the real world of work. Students will become more aware of the interdependence of the many workers within a hospital. They will also learn basic first aid techniques that may help them in their everyday lives.

The major topics included in the unit focus on the interdisciplinary approach with activities integrating social science, math, language arts, science, and art. Performance objective activities include various kinds of multi-media spheres of action.

Teacher Information

This unit may be taught over a period of three-to-six (3-6) weeks. The daily or weekly hours spent on this unit may vary according to the activities or schedules of each teacher. This unit will take a minimum of approximately twenty (20) hours.

This unit has been designed to encourage students to work independently whenever possible. Refer to the reference sheets and activity sheets. Set up stations in the room, as suggested. Have the students keep a record of their individual progress. (Refer to Activity Sheets #1, 7a, 7b and 7c)

Teacher Preparation

1. Read the unit carefully.
2. Make copies of the necessary evaluation and activity sheets.
3. Refer to the Resources and Materials' Columns. Obtain the necessary materials and/or equipment.
4. Note that the following are useful resource materials:

Occupational Outlook Handbook, U.S. Department of Labor, Bureau of Statistics.

World Book Encyclopedia, Field Enterprises Educational Corp. (Examples of topics are: "Hospital; First Aid; Health; Medicine; Barton, Clara; Hippocrates; Reed, Walter; Diet, Human Body; Nutrition; Nursing.")

"Hospital Workers"
Grade 5
(Continued)

See Reference Sheets #1a, 1b, and 1c for a list of addresses of places to send for free materials and information. Suggest that the students might write for free information. (Refer to Capsule #3)

ELEMENTS, THEMES, GOALS, AND PERFORMANCE OBJECTIVES

Element #I - Life-Role Understanding (occupational, avocational, family, civic)

Theme 1.3 - The student will understand the relationship of education to life-roles.

Unit Goal - The student will increase his/her awareness and understanding of the functions of the human body.

Unit P.O. #1 - Given the names of the six (6) systems of the body, the student will identify with at least 70% accuracy, the function of each.
(Evaluation Sheet #3)

Theme 1.5 - The student will understand the characteristics of life-roles and their functions.

Unit Goal - The student will increase his/her awareness of workers within a hospital.

Unit P.O. #2 - Given a list of twenty (20) workers, the student will identify, with at least 80% accuracy, those who may work in a hospital.
(Evaluation Sheet #1)

Unit P.O. #3 - Given a list of ten (10) workers, the student will identify with at least 80% accuracy, the responsibility of each.
(Evaluation Sheet #2)

Unit Goal - The student will understand the ways in which occupations within a hospital are interdependent.

Unit P.O. #4 - Given five (5) hospital workers in various situations, the student will identify an appropriate hospital helper for each.
(Evaluation Sheet #4)

Unit Goal - The student will become more aware of proper actions in an emergency situation.

Unit P.O. #5 - Given a description of eight (8) situations suggesting common emergency problems, the student will identify with at least 80% accuracy, the correct emergency procedure for each.
(Evaluation Sheet #5a and #5b)

Evaluation Procedure
"Hospital Workers"
Grade 5

Pre-Assessment

1. Do not discuss any aspect of this unit with the students before pre-testing.
2. Review the elements, themes, goals, and objectives.
3. Make copies of Evaluation Sheets #1, 2, 3, 4, 5a and 5b for each student.
4. Give the students Evaluation Sheet #1. Read the directions to the students as they read along silently.
5. Follow the same procedure for the other evaluation sheets.
6. Check the students' work; use the answers found at the end of the unit.
    a. Record the students' raw scores in the correct columns (pre-test sections) on Evaluation Tabulation Form B.
    b. Total the number of students who met the criteria as stated in the Performance Objectives.
    c. Transfer these totals to the correct columns (pre-test sections) on Evaluation Tabulation Form A.
7. Study the pre-test results. Determine the areas in which the students need the most practice. Study the unit carefully. Choose activities that will reinforce or teach the skills needed by the students.

Post-Assessment

1. Follow the same procedure as listed in #2-8 above, but record the results in the post-test section of Evaluation Tabulation Forms A and B.
2. Submit the completed Evaluation Tabulation Forms A and B to the building office.

Evaluation Tabulation Form A

Unit Name "Hospital Workers" Teacher

Building Grade 5th

Performance Objective	*Evaluation Sheet #	Test Items	Accepted Level of Performance	# of Students Taking Test	# of Students Reaching Accepted Level	OPTIONAL % of Students Reaching Accepted Level
#2 Pre - Identify hospital workers.	1	20	16			
#2 Post- Identify hospital workers.	1	20	16			
#3 Pre - Identify responsibilities.	2	10	8			
#3 Post- Identify responsibilities.	2	10	8			
#1 Pre - Identify functions of the systems of the body.	3	6	4			
#1 Post- Identify functions of the systems of the body.	3	6	4			
#4 Pre - Identify workers that help.	4	5	5			
#4 Post- Identify workers that help.	4	5	5			
#5 Pre - Identify emergency procedure.	5a & 5b	8	6			
#5 Post- Identify emergency procedure.	5a & 5b	8	6			

*Administer the tests in the sequence listed above.

Date Returned to Principal

Evaluation Tabulation Form B

Unit Name "Hospital Workers" Teacher__________

Building__________ Grade 5th

1. Refer to the pre and post-tests, and then record the students' raw scores in the correct columns below.
2. Figure each student's growth for your own information.
3. Total the number of students who met the criteria as stated in the performance objectives.
4. Transfer these totals to the appropriate columns on Evaluation Tabulation Form A.

Evaluation Sheet #	1			2			3			4			5		
Performance Objective # Students Names	#2 Pre	#2 Post	% of Growth	#3 Pre	#3 Post	% of Growth	#1 Pre	#1 Post	% of Growth	#4 Pre	#4 Post	% of Growth	#5 Pre	#5 Post	% of Growth
1.															
2.															
3.															
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
16.															

Evaluation Tabulation Form B
(Continued)
"Hospital Workers"

Evaluation Sheet #	1			2			3			4			5		
Performance Objective # Students Names	#2 Pre	#2 Post	% of Growth	#3 Pre	#3 Post	% of Growth	#1 Pre	#1 Post	% of Growth	#4 Pre	#4 Post	% of Growth	#5 Pre	#5 Post	% of Growth
17.															
18.															
19.															
20.															
21.															
22.															
23.															
24.															
25.															
26.															
27.															
28.															
29.															
30.															
TOTAL			■			■			■			■			■

Evaluation Sheet #1

Name______________________________

Date______________________________

Check those people listed below who might work in a hospital.

_____ 1. Physical Therapist

_____ 2. Secretary

_____ 3. Farrier

_____ 4. Laundry Worker

_____ 5. Administrator

_____ 6. Inhalation Therapist

_____ 7. Pharmacist

_____ 8. Dietician

_____ 9. Physician

_____10. Pilot

_____11. Candy Striper

_____12. Custodian

_____13. Housekeeper

_____14. Farmer

_____15. Admitting Clerk

_____16. Telephone Operator

_____17. Laboratory Worker

_____18. Maintenance Mechanic

_____19. Occupational Therapist

_____20. Principal

Evaluation Sheet #2

Name______________________________

Date______________________________

Identify each of the following workers by writing the letter in front of each.

A. Dietician
B. Pharmacist
C. Nurse
D. Physical Therapist
E. Physician
F. Admitting Clerk
G. Maintenance Mechanic
H. Administrator
I. X-Ray Technician
J. Accounting Clerk

_____ 1. ...fills the doctor's orders for patients' medicine.

_____ 2. ...follows the doctors orders by giving medication and proper care to the patients.

_____ 3. ...is concerned with preventing deformity and uses exercise and mechanical devices to help patients.

_____ 4. ...writes orders for the patients' treatments, medications, tests, and diets.

_____ 5. ...plans well balanced meals for patients.

_____ 6. ...makes a record of important information needed when patients enter a hospital for treatment.

_____ 7. ...prepares and keeps records of the expenses and income of a hospital.

_____ 8. ...uses special equipment to view patients' bones and other body parts.

_____ 9. ...keeps a check on the different hospital departments to keep them working properly.

_____10. ...keeps the heating and lighting systems working well.

Evaluation Sheet #3

Name ________________________________

Date ________________________________

Match the names of these body systems with their function by placing the proper letter in front of each.

A. Circulatory system

B. Respiratory system

C. Nervous system

D. Skeletal and muscular system

E. Digestive system

F. Reproductive system

_____ 1. ...carries blood through the body.

_____ 2. ...regulates the activities of all the body systems.

_____ 3. ...brings air into the body and removes carbon dioxide through the process of breathing.

_____ 4. ...prepares food so the cells can use it, absorbs the food into the body, and eliminates any materials that cannot be absorbed.

_____ 5. ...is the system necessary for human births.

_____ 6. ...protects and supports the internal organs and helps the body move.

Evaluation Sheet #4

Name____________________________

Date____________________________

Circle the name of the worker who will help the person described in each paragraph.

1. The doctor is treating Mrs. Smith for a liver illness. Mrs. Smith can only be allowed certain types of food. To whom should the doctor look for help in planning meals for Mrs. Smith while she is in the hospital.

   a. Physician b. Dietician c. Custodian

2. Mr. Jones has become very ill, and it is necessary for the nurse to give him his medicine. The nurse finds that the medication is all gone. Who might help the nurse obtain more medication?

   a. Admitting Clerk b. Nurses' Aide c. Pharmacist

3. All the rooms on the second floor of the hospital have gotten very cold. The nurses have done everything possible to make their patients comfortable. Whom might they call for help?

   a. Dietician b. Maintenance Mechanic c. X-Ray Technician

4. Bobby fell out of a tree and went to the hospital emergency room so Dr. Brown could check his arm. Dr. Brown thought Bobby's arm was broken, but she couldn't tell for sure. Whom might she call for help?

   a. X-Ray Technician b. Inhalation Therapist c. Administrator

5. Mrs. Black was sent to the hospital because she was having difficulty breathing. Dr. Platt knew that she needed help and that there was a machine that might aid her. Dr. Platt didn't know exactly how the machine worked, but he called someone who did. Whom do you think he called?

   a. Electrician b. Pharmacist c. Inhalation Therapist

Evaluation Sheet #5a

Name_______________________________

Date_______________________________

Check the proper immediate care that should be given to the victim in each of the following situations.

1. You are peeling potatoes. You cut your hand, and it is bleeding severely. You should

_____a. Run cold water over the hand.

_____b. Call the doctor.

_____c. Firmly press a clean folded piece of material over the cut area.

2. You are on a picnic. You accidently step on some hot coals and burn your foot. You should

_____a. Cover the burn with butter.

_____b. Place the burn in cold water.

_____c. Use vaseline.

3. You are visiting your neighbor. You are bitten by a dog. There is no bleeding. You should

_____a. Bandage the bite.

_____b. Wash the bite with soap and water.

_____c. Drink a glass of warm milk.

4. You are walking along the beach. You notice that a child has fallen into the water. The child does not come out, and you fear the child has drowned. You lift the child from the water. You can see that the child has stopped breathing. You should

_____a. Call the doctor.

_____b. Give artificial respiration.

_____c. Hit the victim sharply on the back.

5. You are watching your three year old friend, Betty, play. She chokes on a wooden bead. You should

_____a. Hold the child upside down and pat her firmly on the back.

_____b. Lay the child on her stomach until she stops choking.

_____c. Give the child something to drink.

Evaluation Sheet #5b

Name______________________________

Date______________________________

6. You are taking care of your baby brother. You walk into the kitchen and discover that he has swallowed a poisonous liquid. You should

_____a. Make him vomit and call the doctor.

_____b. Make him drink lots of milk and call the doctor.

_____c. Have him lie on his stomach and slap him on the back.

7. You have been outside so long you feel like your hands are frozen. Your fingers are white. You should

_____a. Wrap yourself in a warm blanket and put your hands in warm water.

_____b. Run cold water over your hands and call for help.

_____c. Rub snow on your hands and then wrap them in a hot towel.

8. You find your neighbor's small child sitting in your backyard. You discover that she has eaten an entire bottle of baby aspirins.

_____a. Make her lie down and cover her with a blanket.

_____b. Encourage her to go to sleep and call for help.

_____c. Try to make her vomit and call for help.

Answers to the Evaluation Sheets

Evaluation Sheet #1

1. Physical Therapist
2. Secretary
4. Laundry Worker
5. Administrator
6. Inhalation Therapist
7. Pharmacist
8. Dietician
9. Physician
11. Candy Striper
12. Custodian
13. Housekeeper
15. Admitting Clerk
16. Telephone Operator
17. Laboratory Worker
18. Maintenance Mechanic
19. Occupational Therapist

Evaluation Sheet #2

1. B Pharmacist
2. C Nurse
3. D Physical Therapist
4. E Physician
5. A Dietician
6. F Admitting Clerk
7. J Accounting Clerk
8. I X-Ray Technician
9. H Administrator
10. G Maintenance Mechanic

Evaluation Sheet #3

1. A Circulatory System
2. C Nervous System
3. B Respiratory System
4. E Digestive System
5. F Reproductive System
6. D Skeletal and Muscular System

Evaluation Sheet #4

1. B Dietician
2. C Pharmacist
3. B Maintenance Mechanic
4. A X-Ray Technician
5. C Inhalation Therapist

Evaluation Sheet #5a and #5b

1. C
2. B
3. B
4. B
5. A
6. B
7. A
8. C

Capsule #1
Introduction

I. Introduce this unit and capsule with a class discussion.

   A. Ask the students how many of them have gone to a hospital as a patient, as a visitor, or for an examination?

   B. Ask them to name some hospital workers that they saw while they were in the hospital? (List these workers on the board as the students name them.)

   C. Ask the students to think of other hospital careers that are very important, but may not be mentioned as often. (Maintenance worker, laundry worker, food service worker, secretary, engineer, voluntary worker, etc.)

   D. Ask them to identify the need for varying levels of education or training for all these different hospital careers. (Greater levels of responsibility require more education and knowledge.)

II. Explain that different departments are found within a hospital.

   A. Introduce the Professional Staff - hospital personnel directly concerned with the care of patients; i.e., physicians, registered nurses, practical nurses, etc.

   B. Introduce the Professional Service Department - personnel also directly concerned with the care of patients; i.e., dieticians, technicians, therapists, laboratory workers, etc.

   C. Introduce the Administration Department (the business offices, personnel office, admitting office, volunteer - service director's office, etc.) - personel concerned with office work; i.e., administrator, purchasing agent, accountant, clerks, volunteer workers, etc.

   D. Introduce the Maintenance Department - personnel who care for the hospital building and grounds; i.e., housekeeper, engineers, laundry workers, custodians, etc.

III. Ask the students to look at the jobs they named on the board in I.C. above. Ask if they can group those jobs into the above departments. (See IIA-D)

   A. Ask the students if these jobs seem interrelated? (Yes)

   B. Ask the students to tell how these departments are related? (Each performs a part of the larger job of taking care of patients.)

Resources & Materials	Notes

IV. Explain to the students that during this unit they will be doing the following activities:

A. Explain that they will learn more about workers in each of the four (4) departments and how those workers' jobs are interrelated.

B. Say that they will be working independently, and doing hands-on activities that will help them to become a little more aware of what some of these workers do. (See Activity Sheet #1)

C. Explain that they will study about the different body systems.

D. Stress that they will be learning first-aid techniques which everyone should know.

V. Choose from these optional related activities.

A. Have the students make a bulletin board:

1. Let them make a collage from pictures of hospital workers.

2. Have them depict specific departments of the hospital as they study each section.

3. Let the students depict job requirements in terms of education and/or special training.

4. Have them make a chart showing the four main hospital departments studied. (Refer to Activity #II on page 13 of this capsule.)

5. Let them make charts depicting the body systems.

6. Have them make a collage depicting emergency situations.

B. Allow the students to visit a hospital. (See Reference Sheets #2a and #2b)

C. Show a film or filmstrip depicting hospital workers.

Resources & Materials	Notes
B. Activity Sheet #1	
B. Reference Sheets #2a and #2b	

Capsule #2
First Aid

I. Introduce this capsule by making arrangements with one of the students to role-play an emergency situation; i.e., to gasp, to cough, to fall over and pretend he/she is choking, etc. (Try to choose a student who can role-play well.)

   A. Observe the students reactions, and quickly ask the students for suggestions; i.e., "Oh, look!" "What can we do?" "Does anyone know how to give artificial respiration?" etc. (Note that you will need to role-play well, also. Do not carry this situation too far because it might be frightening for some students.)

   B. Explain the situation, and discuss the following questions with the students:

      1. Say, "How did you feel when this first happened?"

      2. Ask, "Did any emergency first aid treatments run through your mind?" "What were they?" (List the answers on the board, and discuss them. Do not criticize any responses, but discuss possible consequences.)

      3. Say, "Have you ever been in a real emergency situation?" "How did you react?"

   C. Explain to the students that under no circumstances should they pretend to be in danger when they are not.

      1. Discuss the story of "The Boy Who Cried Wolf."

      2. Discuss different situations where people have lost lives because others thought they were "playing wolf".

II. Explain to the students that they will be learning emergency first aid techniques.

   A. Stress the fact that everyone, not just hospital workers, should know some basic first aid techniques.

   B. Explain, also, that techniques change as knowledge is gained. Stress that the techniques they will be learning may someday be outdated; i.e., old prone artificial respiration and modern mouth-to-mouth resuscitation.

      1. Say that there are many sources where students may obtain free material on first aid techniques. (Explain that because of changing techniques, it is important that everyone use only the most up-to-date information.)

Resources & Materials	Notes

Capsule #2
(Continued)

---

2. Note that good resources are "What Everyone Should Know About First Aid," and Reference Sheets #3a 3b, 3c, 3d, 3e, and 3f.

III. Teach emergency first aid techniques.

   A. Demonstrate first aid techniques to the students. (See Reference Sheets #3a, 3b, 3c, 3d, 3e, and 3f)

   B. Have a role-model demonstrate first aid techniques to the students. (See Reference Sheet #4)

   C. Let the students complete Activity Sheet #2 independently or together as a class project.

IV. Have the students demonstrate correct first aid techniques. (See Reference Sheet #5a and #5b)

   A. Allow the students to role-play emergency situations.

   B. Keep a record of the students who demonstrated first aid techniques correctly. (See Activity Sheet #1 and Reference Sheet #5a and #5b)

V. Choose from these optional related activities.

   A. Allow the students to do language arts activities.

      1. Let them do a word puzzle. (See Activity Sheet #3)

      2. Have them find synonyms for words. (See Activity Sheet #4)

   B. Encourage the students to learn rescue techniques.

      1. Review rescue techniques with the students. (See Reference Sheet #6)

      2. Allow the students to role-play rescuing others.

Resources & Materials | Notes

2. Reference Sheets #3a, 3b,3c, 3d, 3e, and 3f
   "What Everyone Should Know About First Aid," Channing L. Bete Co.

A. Reference Sheets #3a, 3b, 3c, 3d, 3e, and 3f

B. Reference Sheet #4

C. Activity Sheet #2

IV. Reference Sheet #5a and #5b

B. Activity Sheet #1 and Reference Sheet #5a and #5b

1. Activity Sheet #3

2. Activity Sheet #4

1. Reference Sheet #6

Capsule #3
The Administrative Department

I. Review the four (4) main departments of the hospital.

II. Discuss the importance of the Administrative Department.

   A. Ask who directs the activities of hospitals. (A Hospital Administrator or Director)

   B. Ask the students why administrators are needed.

   C. Explain that there are many workers in the Administrative Department. Explain that these workers assist the Chief Administrator or Director in many ways; i.e., making recommendations, typing, paying bills, etc.

   D. Ask how the principal's and superintendent's jobs are similar to that of a hospital administrator. (They are responsible for keeping things running smoothly, for the hiring and firing of personnel, for purchasing material and equipment, etc.)

   E. Ask how schools, factories and large businesses are alike. (They all have many people working together for a common cause. They all have a variety of workers with different responsibilities; i.e., administrators, clerical workers, people for the care or direction of others, workers who maintain the building and grounds, etc.)

III. Acquaint the students with the different workers from the Administrative Department of a hospital:

   A. Show films or filmstrips such as "Hospital Administrative Jobs" and "How About Office Work?"

   B. Ask the students to identify the workers they saw in the film or filmstrip, or on an actual visit to a hospital.

   C. Discuss the responsibilities of these workers; i.e., the business office - is responsible for such things as making decisions concerning the building and for paying bills; the admitting office - is responsible for admitting patients; the personnel office - is responsible for the hiring and firing of workers; the volunteer service director's office - is responsible for coordinating volunteer workers.

Resources & Materials	Notes

D. Stress the skills used by these workers and the importance of accuracy in their work.

E. Discuss the steps involved in admitting a patient to a hospital.

IV. Set up stations in the room, and allow the students to role-play some tasks performed by a few workers from the different offices of the Administrative Department.

A. Have the students role-play workers in the admitting office. (See Reference Sheets #7a, 7b, and 7c - Station II and Activity Sheets #5a Part I, and #7a)

B. Allow the students to role-play the director or the assistant directors. (See Reference Sheets #8a, 8b, 8c, and 8d - Station III and Activity Sheets #6a, 6b, 6c, and 7a.)

C. Design, or encourage the students to design, other stations that represent working situations from the Administrative Department.

V. Choose from these optional related activities.

A. Encourage the students to raise funds to purchase something for their community hospital.

B. Have the students make tray favors. Allow one (1) or two (2) students to represent their class and deliver these tray favors to residents of a rest home or to patients in a hospital.

Resources & Materials	Notes
A. Activity Sheets #5a and #7a Reference Sheets #7a, 7b, and 7c - Station II B. Activity Sheets #6a, 6b, 6c, and 7a Reference Sheets #8a, 8b, 8c, and 8d - Station III	

Capsule #4
Nurses

I. Write the words "Angels of Mercy" on the board. Ask the students if they know to which workers this title refers. (Nurses)

   A. Ask the students to tell why they think nurses have been called "Angles of Mercy."

   B. Encourage the students to search and find out where this title originated.

II. Refer to the four (4) main hospital departments and groups of personnel (Professional Services Staff, Professional Services Department, The Administrative Department, and the Maintenance Department).

   A. Ask the students to identify the general department to which the nurses belong.

   B. Remind the students that there are many departments within each of the four (4) main departments.

III. Have the students find out more about nurses. Encourage them to read books and encyclopedias; view films and filmstrips; interview some nurses (See Reference Sheet #4); or go on a field investigation (See Reference Sheets #2a and #2b).

   A. Stress the skills used by nurses, and emphasize and how these skills are used. (Be sure to stress such skills as making observations and quick decisions as well as academic skills.)

   B. Ask what training is required to become a nurse. (Explain that there are many types of nurses; i.e., registered, practical, specialist, etc.) (See Reference Sheet #9)

   C. Encourage the students to think about the type of nurse they would want to have take care of them if they were sick.

      1. Ask if they would want a nurse who was gentle or rough?

      2. Ask how would they feel if their nurse was lazy and did not try to do his/her best?

      3. Ask if they would want a nurse who had studied hard and knew what he/she was supposed to do?

      4. Ask the students who have been hospitalized to tell how they were treated or cared for by the nurses.

Resources & Materials	Notes
III. Reference Sheets #2a, 2b, and 4.	
B. Reference Sheet #9	

D. Ask the students to tell who usually gives medication and/or shots?

  1. Stress that medication and shots are usually given by a registered nurse. (Say that sometimes the doctor will give a medication or shots.)

  2. Explain that it is illegal for anyone but a doctor to prescribe medicine.

  3. Stress that the main duty of a registered nurse is to care for patients under the direction of the doctor or doctors.

E. Ask the students whether a person has to be a male or female to be a nurse.

  1. Say that both may be nurses.

  2. Explain that more male nurses are needed.

  3. Stress that nursing is very strenuous work.

IV. Have the students find out on what types of workers the nurses depend and how.

  A. Explain that nurses aides help the nurses by giving general care to the patients; i.e., changing the linens, giving baths to patients, and emptying bed pans.

  B. Say that practical nurses may also perform similar duties, but their responsibilities may include more complicated skills.

  C. Explain that other workers keep the hospital clean, see that supplies are available, admit the patients, etc.

V. Set up stations in the room and allow the students to role-play some tasks performed by nurses. (Explain that these are only a very few of the tasks performed by nurses. Stress the importance of neatness and accuracy in these roles.) Have the students work in pairs as they perform the activities at each of these stations.

  A. Have them complete the patients medical history. (See Reference Sheets #10a and #10b-Station IV, and Activity Sheets #5a Part II & #7b)

  B. Allow them to measure and weigh the patient. (See Reference Sheets #11a and #11b - Station V, Reference Sheet #12, and Activity Sheets #5b Part III A and B, and #7b)

Resources & Materials	Notes
A. Activity Sheets #5a and #7b Reference Sheets #10a and #10b	
B. Activity Sheets #5b and #7b Reference Sheets #11a, 11b, and 12	

C. Have them test the patient's eyes. (See Reference Sheets #13a and #13b - Station VI and Activity Sheets #5b and #7b)

D. Let them test the patient's hearing. (See Reference Sheets #14a and #14b - Station VII and Activity Sheets #5b and #7b)

E. Let them take the patient's temperature (optional), pulse, and respiration. (See Reference Sheets #15a, 15b, 15c - Station VIII and Activity Sheets #5c and #7b)

F. Have them take the patient's blood pressure. (See Reference Sheets #6a, 6b, 6c, and 6d - Station IX and Activity Sheets #5c and #7b)

VI. Choose from these optional related activities.

A. Let the students practice giving injections or give a demonstration on how an injection is given. (See Reference Sheets #17a, 17b, 17c, - Station X and Activity Sheets #5c and #7b) Carefully consider whether or not this is an appropriate activity for your students.

B. Let the students practice math and graphing skills.

1. Allow each student to chart his/her pulse rate or that of a classmate. (See Activity Sheet #8)

2. Have each student chart his/her own respiration rate or that of a classmate. (See Activity Sheet #9)

3. Enlarge copies of Reference Sheets #18 and #19 and allow the entire class to work together to make two large bar graphs: one depicting each member's pulse rate and one depicting each member's respiration rate. (Note that another possibility is to make one set of graphs for the boys and another for the girls.)

4. Encourage the students to complete Activity Sheet #10 if they did the activity in #3 above.

5. Allow the students to complete Activity Sheet #11 if the class completed Reference Sheet #12. (Give the students a duplicated copy of the completed Reference Sheet #12.)

C. Let the students use their scientific skills.

1. Have them practice reading a medical thermometer.

Resources & Materials	Notes
C. Activity Sheets #5b and #7b Reference Sheets #13a and #13b	
D. Activity Sheets #5b and #7b Reference Sheets #14a and #14b	
E. Activity Sheets #5c and #7b Reference Sheets #15a, 15b, and 15c	
F. Activity Sheets #5c and #7b Reference Sheets #6a, 6b, 6c, and 6d	
A. Activity Sheets #5c and #7b Reference Sheets #17a, 17b, and 17c	
1. Activity Sheet #8	
2. Activity Sheet #9	
3. Reference Sheets #18 and #19	
4. Activity Sheet #10	
5. Activity Sheet #11 Reference Sheet #12	

a. Show them how to shake the mercury down before they begin. Let each student place a thermometer into cool water and read it; let him or her place it into warm water and read it again. (Stress the importance of the care of a thermometer.)

b. Give the students Activity Sheets #12a and #12b to complete alone, or do these sheets as a class project.

2. Ask some of the students to do research about the properties of mercury. Ask them to report this information back to the class.

3. Stress that they have been working a great deal with the respiratory system of the body. Ask them to identify the other important systems of the body; i.e., the circulatory system, the nervous system, the skeletal and muscular system, and the reproductive system.

D. Allow the more able students to complete Activity Sheets #13a and #13b.

Resources & Materials	Notes
b. Activity Sheets #12a and #12b	
D. Activity Sheets #13a and #13b	

Capsule #5
Medical Practitioner

I. Introduce this capsule by writing the following words on the board: osteopaths, chiropractors, and podiatrists.

   A. Ask the students to tell what type of work these people might perform. (They all work to prevent, cure, and alleviate disease.)

   B. Explain that they are all medical practitioners.

   C. Ask the students to name some other types of medical practitioners. (optometrists, physicians, and veterinarians)

   D. Ask the students to recall the four (4) main departments in a hospital. Ask to which of these departments the physician belongs. (Professional Staff)

II. Explain to the students that medical practitioners use research and reading skills. Have the students practice these skills as they complete Activity Sheets #14a and #14b. (Allow them to work individually, in small groups, or with the entire class.)

III. Encourage the students to find out more about physicians. (Have them read, view films or filmstrips, interview a physician, or go on a field investigation.) Let the students discuss what they have learned.

   A. Ask what skills physicians use and how they use these skills. (Be sure to stress other than mere academic skills; i.e., making observations, drawing conclusions, making inferences, etc.)

   B. Ask what training is required to become a doctor.

   C. Encourage the students to think about the type of doctor they would prefer.

      1. Ask if they would want a doctor who is careless.

      2. Ask if they would prefer a doctor who is very dependable.

      3. Ask how they would feel about a doctor who does not try to keep up with the latest medical findings.

      4. Ask if they would want a doctor who is always grouchy.

      5. Ask them to describe some desirable characteristics they would prefer their doctors to have.

Resources & Materials	Notes
II. Activity Sheets #14a and #14b	

D. Ask whether doctors are male or female? (Stress that it doesn't matter whether they are male or female.)

IV. Have the students discover upon which workers the physician depends by interviewing a physician, going on a field investigation, reading, and/or viewing films or filmstrips.

A. List these workers on the board as the students name them. Ask how their responsibilities are interrelated with the work of the physician.

B. Allow the students to make a large mural that illustrates how these workers depend on each other.

C. Let the students complete Activity Sheet #15.

V. Explain to the students that a physician must have a tremendous amount of training. Note that before and during the treatment of a patient, the doctor runs many tests and makes many observations.

A. Say that as the physician examines the patient he/she is looking for very specific information.

1. Explain that the physician must keep accurate records of the patient's condition.

2. Stress that doctors keep records in their offices and that a doctor may refer to something that he/she noticed about the patient several years earlier.

3. Explain that a doctor also takes into consideration reports and observations made by many other workers; i.e., the nurses, the lab technicians, the X-ray technicians, etc.

4. Stress that all of these other people can only make and report their individual observations. Explain that it is the doctor's responsibility to take all of this information into consideration as he/she decides what should be done to help the patient.

B. Set up stations in the room. Divide the students into pairs, and allow them to role-play a doctor examining a patient. Review the instructions with the students before they begin.

1. Give each student a copy of Activity Sheets #16a and #16b, and review the things a doctor looks for while examining a patient.

Resources & Materials	Notes
C. Activity Sheet #15	
1. Activity Sheets #16a and #16b	

2. Remind them to record observations carefully as they role-play. (See Activity Sheets #5a, 5b, and 5c)

3. Explain that the patients will have to move to different stations as they are being examined. Tell them that this allows more students to participate at the same time.

    a. Have the students examine the patient's eyes, ears, nose, and throat. (See Reference Sheets #20a, 20b, 20c, 20d, and 20e - Station XI, and Activity Sheets #5b, 5c, and 7b)

    b. Let them examine the patient's heart and lungs and make other observations. (See Reference Sheets #21a and #21b - Station XII and Activity Sheets #5b, 5c, 5d, and 7b)

C. Tell the students that they will practice other skills as they apply a cast. (See Reference Sheets #22a and #22b - Station XIII and Activity Sheet #7b)

D. Allow the students to test their dexterity skills as they take stitches in a wound. (See Reference Sheets #23a and #23b - Station XIV and Activity Sheet #7b)

VI. Choose from these optional related activities.

A. Encourage students to do Language Art activities related to the medical profession.

1. Allow them to search to find the answers to the crossword puzzle on Activity Sheet #17.

2. Let them do a word search. (Activity Sheet #18)

3. Have them search to find the answers for Activity Sheet #19.

4. Have them search to find the answers for Activity Sheet #31.

5. Let them complete the crossword puzzle on Activity Sheet #32.

B. Read Activity Sheet #20. Let the students complete this aptitude questionnaire for physicians. (See Activity Sheet #20)

C. Encourage the students to use science reference material to complete Activity Sheets #21a and #21b. Allow those students who need more help to work with faster students.

D. Review the different areas in which physicians specialize. (See Reference Sheet #24)

Resources & Materials

Notes

2. Activity Sheets #5a, 5b, and 5c

a. Activity Sheets #5b, 5c, and 7b
Reference Sheets #20a, 20b, 20c, 20d, and 20e

b. Activity Sheets #5b, 5c, 5d, and 7b
Reference Sheets #21a and 21b

C. Activity Sheet #7b
Reference Sheets #22a and 22b

D. Activity Sheet #7b
Reference Sheets #23a and #23b

1. Activity Sheet #17

2. Activity Sheet #18

3. Activity Sheet #19

4. Activity Sheet #31

5. Activity Sheet #32

B. Activity Sheet #20

C. Activity Sheets #21a and #21b

D. Reference Sheet #24

Capsule #6
Professional Services Departments

I. Review the four (4) main departments with the students. (Professional Staff, Professional Services Department, Administrative Department, and Maintenance Department)

II. Explain to the students that they will be studying about other groups of workers who are also directly concerned with the care of the patient. Stress the importance of the roles of these workers. Let the students search to find more information about these workers. Encourage them to use films and filmstrips, encyclopedias, and other books. Have them interview role models and go on field investigations. (See Reference Sheets #2a, 3b, and 4)

   A. Give each student Activity Sheet #22.

   B. Divide the students into small groups, or have the entire class discuss Activity Sheet #22 as they attempt to answer the questions.

III. Let the students role-play some activities related to a few of these workers.

   A. Let them role-play a Radiologist and practice using their observation skills. (See Reference Sheets #25a and #25b - Station XV and Activity Sheets #7c and #23)

   B. Allow the students to role-play a Dietician. (See Reference Sheets #26a and #26b - Station XVI and Activity Sheets #7c, 24a, and 24b)

   C. Let the students use their measuring and observational skills as they role-play a pharmacist. (See Reference Sheets #27a and #27b - Station XVII and Activity Sheets #7c, 25a, 25b, 25c, and 26)

IV. Choose from these optional related activities.

   A. Emphasize the relationship of drugs to the health of the body. Stress the possible consequences of taking drugs without prescriptions.

      1. Encourage the students to make reports about drugs.

      2. Give them a copy of Katy's Coloring Book about Drugs and Health which may be obtained from the U.S. Department of Justice, Drug Enforcement Administration.

Resources & Materials

Notes

A. Activity Sheet #22

B. Activity Sheet #22

A. Activity Sheets #7c and #23 Reference Sheets #25a and #25b

B. Activity Sheets #7c, 24a, and 24b

C. Activity Sheets #7c, 25a, 25b, 25c, and 26

3. Lead them in a discussion after they have read the coloring book.

B. Encourage the students to make reports about other professionals whose work is important in the diagnosis and treatment of diseases.

Resources & Materials	Notes

Capsule #7
Maintenance Department

I. Introduce this capsule by writing the word Maintenance Department on the board.

   A. Ask the students to tell what they think the responsibilities of a Maintenance Department would be? (Caring for the hospital building, equipment, and ground.)

   B. Explain that this department is divided into three departments: engineering, housekeeping, and laundry.

   C. Write the names of these three (3) departments on the board.

   D. Ask the students to tell what they think the responsibilities of each of these might be. (Note that the engineering department takes care of the heating system, the housekeeping department keeps the hospital clean, and the laundry department cleans, sorts, presses, and marks the hospital linens.

II. Discuss with the students where, other than in a hospital, these types of workers might be found. (Note that all three (3) types may work in hotels, motels, restaurants, and on ships. Say that engineers may work in any larger organization where there is the same types of equipment - factories, schools, department buildings, etc.)

III. Write the word "Housekeeping" on the board. Discuss the following questions with the students:

   A. Ask, "What do you think of when I say housekeeping?" (Expect negative reaction.)

   B. Ask, "What would be some of the responsibilities of workers in a housekeeping department of a hospital?" (Clean and polish floors; wash walls, and windows, order cleaning supplies, etc. List the students' responses on the board.

   C. Ask, "Is this work done by men or women?" (Be sure to stress that both men and women take care of keeping a hospital clean.)

   D. Ask, "How might the skills you learned or will learn in school help you if you were responsible for keeping a hospital clean?" (Reading labels and instructions, being responsible, following directions, etc.)

Resources & Materials	Notes

IV. Set up a housekeeping station in the room. Let the students role-play a worker in the housekeeping department. (See Reference Sheets #28a and #28b - Station XVIII and Activity Sheet #7c)

V. Write the words Laundry Department on the board. Discuss the duties performed by workers in this department.

   A. Let the students visit a Laundry Department in a hospital or a regular laundry. (See Reference Sheets #2a and #2b)

   B. Allow the students to talk with workers from a laundry department. (See Reference Sheet #4)

   C. Take the students to a laundromat.

      1. Allow them to sort, wash, and fold some towels and sheets.

      2. Encourage the students to make observations as to the effect different cleaning products have on the laundry. Ask what happens to clothes that are not folded or pressed, and what are observable differences between clothes washed in cold or in hot water.

   D. Set up Station XIX. Allow the students to work alone or all at the same time as they do an experiment to determine which types of detergents are the strongest. (See Reference Sheets #29a and #29b - Station XIX and Activity Sheets #7c and #27.)

VI. Write the word Engineering Department on the board. Ask the students to discuss the type of work that is performed by these workers.

   A. Let the students visit workers from the Engineering Department of a hospital.

   B. Stress that these same types of workers may be found in any large company, even a school. Point out the fact that these workers may also be referred to as Maintenance Workers. Tell them that in a large manufacturing company the engineering department usually refers to the workers who design a product.

   C. Emphasize the skills that are needed by these workers; i.e., they must make observations; they must be alert; they must be able to draw conclusions after they have made observations; and they must figure the length of the wires, how much electricity will be used, and what size of wire is needed to operate the different machines.

Resources & Materials

Notes

IV. Activity Sheet #7c
Reference Sheets #28a and #28b

A. Reference Sheets #2a and #2b

B. Reference Sheet #4

D. Activity Sheets #7c and #27
Reference Sheets #29a and #29b

D. Set up Station XX. Let the students use their scientific skills as they complete the activities for this station. (See Reference Sheets #30a and #30b - Station XX and Activity Sheets #7c and #28)

VII. Choose from these optional related activities.

A. Allow the students to role-play the workers and at the same time keep the classroom clean.

1. Assign the Head Housekeeper to do the following:

a. Let him/her assign jobs (duties) to the students.

b. Have him/her order or obtain the necessary cleaning materials and equipment.

c. Have him/her check on the other workers. (See Activity Sheet #29)

2. Let the students assigned as Assistant Housekeepers run errands; i.e., obtaining equipment, keeping other workers supplied, etc.

3. Allow the students assigned as workers in charge of cleaning equipment to clean window sills, counter tops, table tops, etc., and related this to keeping walls, windows, and floors clean. Let them clean desks and relate this to beds that need to be kept germ free. Let them clean tools such as sponges and rags and relate this to cleaning equipment used in hospitals.

B. Try variations of the experiment done with the soap in Station XIX.

1. Allow the students to work in small groups. Let each student help with a particular part of the experiment; i.e., setting it up, doing the experiment, recording the results.

2. Let the students experiment by testing whether hot water or cold water breaks up oil droplets faster.

3. Let them experiment by testing whether bleach added to detergent, bleach used by itself, or detergent used alone breaks up oil droplets faster.

4. Individualize this experiment in the following way:

Resources & Materials	Notes
D. Activity Sheets #7c and #28 Reference Sheets #30a and #30b - Station XX	
c. Activity Sheet #29	

a. Give each student four (4) small paper cups. (Let the students mark them A, B, C, and D.)

b. Have the solutions mixed in large bottles. Pour the solution into the students' cups.

c. Put a drop of oil in each cup.

C. Stress the importance of observational skills and reading skills by giving each student a copy of Activity Sheet #30.

1. Have them observe cleaning products that have been placed in the front of the room (bleach, ammonia, Spic & Span, Sani-Flush, etc., and a bottle labeled water.) Be certain you supervise the students closely whenever you allow them to handle poisonous or dangerous products. Have each student complete Activity Sheet #30.

2. Accept any answers that can be supported by the directions on the labels.

3. Discuss the students answers. (Stress the importance of following directions.)

Resources & Materials	Notes
C. Activity Sheet #30 1. Activity Sheet #30	

Reference Sheet #1a

Free Materials

Pfizer Inc. Informational Services 235 East 42nd Street New York, NY 10017	Your Career Opportunities in Hospitals Your Career Opportunities in Medicine Your Career Opportunities in Pharmacy
National Institute of Mental Health Public Inquiries 5600 Fishers' Lane Rockville, MD 20852	Nursing Careers in Mental Health
National Assoc. of Retail Druggists One East Wacker Drive Chicago, IL 60601	There Is A Future For You In Pharmacy
American Assoc. for Inhalation Therapy 3554 Ninth Street Riverside, CA 92501	Considering A Career in Inhalation Therapy
American Society of Pharmacology and Experimental Therapeutics Inc. 9650 Rockville Pike Bethesda, MA 20014	This Is The Profession of Pharmacology
American Hospital Association Division of Careers & Recruitment 840 North Lake Shore Drive Chicago, IL 60611	Hospital School of Nursing
American Pharmaceutical Assoc. 2215 Constitution Avenue Washington, D.C. 20037	What Is An Optometrist?
American Medical Record Assoc. Administration Services 875 Michigan Avenue, Suite 1850 Chicago, IL 60611	Medical Record Librarian - Key of The Modern Medical Team

Reference Sheet #1b

American Medical Association 535 N. Dearborn Street Chicago, IL 60610	Modern Surgery
American Podiatry Association Department of Public Affairs 20 Chevy Chase Circle, N.W. Washington, D.C. 20015	Little Johnny Sorefoot
National Association for Mental Health 1800 North Kent Street Arlington, VI 22209	What Every Child Needs For Good Health
Colgate - Palmolive Ltd. Prof. Services Department 237 City Road St. Johns, New Brunswick, Canada	Why Should I Brush?
American Medical Association Department of Health Ed. 535 North Dearborn St. Chicago, IL 60610	Your Body and How it Works?
Standard Milling Co. Attn: Consumer Service Dept. 1009 Central St. Kansas City, MS 64105	Basic Four Foods Chart
U.S. Department of Agriculture Food and Nutrition Service Washington, D.C. 20250	Food For Fitness Good Foods Coloring Book Jimmy Has More Fun
American Medical Technologist 710 Higgins Road Park Ridge, IL 60058	Laboratory Assistant
American Dietetic Asso. 620 North Lake Shore Dr. Chicago, IL 60611	Dietician Dietary Assistant

Reference Sheet #1c

American Assoc. for Inhalation Therapy 3554 Ninth Street Riverside, CA 92501	Inhalation Therapist
American Hospital Association 840 North Lake Shore Drive Chicago, IL 60611	Nurses Aide
National Assoc. for Practical Nurse Ed. 1465 Broadway New York, NY 10019	Practical Nurse
American Nurses' Assoc. 10 Columbus Circle New York, NY 10019	Registered Nurse
American Assoc. of Colleges of Pharmacy 850 Sligo Avenue Silver Springs, MD 20910	Pharmacy Clerk
American Occupational Therapy Assoc. 251 Park Avenue South New York, NY 10010	Occupational Therapist
American Physical Therapy Assoc. 1156 - 15th Street, N.W. Washington, D.C. 20005	Physical Therapist
American Medical Assoc. 535 North Dearborn Street Chicago, IL 60610	Radiologic (X-Ray) Technologist and Technician

Reference Sheet #2a
Field Investigation

Call the place the class is planning to visit at least one month in advance. Follow-up this call with a letter confirming all the things discussed and planned.

Discuss with the individual the following things:

1. Tell what you wish to see.
2. Mention what general questions the students will be asking.
3. Say how long they will be there.
4. Tell how many students will come.
5. Ask to which workers the students may talk.
6. Ask what equipment or tools the students may use or see.
7. Find out what kind of "hands on" experiences the students may have.

Obtain the principal's approval before planning the field investigation. Make bus arrangements for the students at least two weeks in advance.

Have two or three parents accompany the students on their trip. Contact them at least two weeks in advance.

Send a letter home to the parents telling where the students are going, when they are going, and if they need anything extra in the way of food, clothing, or money.

Prepare the students before the trip with the questions to ask the workers they will be seeing. Note that each investigation will be different. Suggest to the students that they bring a camera along.

Be sure to remind the building principal on the day of the trip about where the students are going and when they will return. Do the following activities when the students return from their trip:

1. Review what the students observed.
2. Review the interviews with the workers.

Be sure to send a thank-you letter or to have the students write and send one.

Reference Sheet #2b
Field Investigation
(Continued)

1. Ask what students can learn at a hospital.
    a. Ask if there are different departments they might visit.
    b. Ask if anyone can name some of those departments. (X-ray, Admitting, Laboratory, etc.)
    c. Ask who are some of the hospital workers the students might meet. (Dietician, Nurses, Business Manager, Receptionist, Cafeteria Workers, Laundry Workers, Therapists (physical, inhalation), X-ray Workers, Maintenance Men, Gray Ladies, etc.)
2. Show the filmstrips Working In a Hospital and Things You Will See.
3. Discuss the responsibilities of hospital visitors.
    a. Ask why there is a need for quietness.
    b. Ask why good manners are important.
4. Discuss the need for asking sensible questions when the opportunity arises on the field trip or during the role-models' visit.
    a. Let the students ask what are the worker's job responsibilities.
    b. Let them ask what education or training is necessary for his/her job.
    c. Let them ask what the worker likes the most about his or her job, and what he or she likes the least.
    d. Let them ask what tools or equipment the worker uses.
    e. Let them ask what are desirable worker characteristics for his or her job.
5. Let the students discuss and evaluate their trip to the hospital.
6. Have the students send thank-you letters to the appropriate members of the hospital staff within a day or two after their visit.

Reference Sheet #3a
General Instructions
and
Giving First Aid Techniques Station I

Note that in this unit there will be several stations that can be set up in the classroom. Observe that these stations have been designed to make the students aware of the tasks performed by hospital workers and to teach first aid techniques.

Note that instructions for setting up these stations are outlined on the various reference sheets. Observe that the instructions include: a list of materials needed to set up the stations, directions for setting up the equipment and materials, and specific directions for the students.

Have the students keep a record of their progress as they complete the instructions outlined for each station. (See Activity Sheets #1 and 7a, 7b, and 7c) Keep a teacher's record of their progress also. (See Reference Sheets #5a, 5b, 5c, 5d, and 5e)

Note that Station I is set up a little differently from the other stations. Be sure that first aid techniques are demonstrated by an expert before they are practiced by the students.

Reference Sheet #3b
Station I
First Aid Techniques

I. Obtain the following materials.

Activity Sheet #1 for the students
Reference Sheet #5a for the teacher
Written instructions on correct first aid techniques (from doctors, insurance companies, the American Red Cross, or Reference Sheets #3c, 3d, 3e, and 3f)
Strips of cloth (for bandages and for tying on splints)
Sticks for splints (broom handles, branches, boards, etc.)
Clean empty containers with poison antidotes listed on the sides
Clean empty milk cartons
Large dolls
Alcohol, cotton, and a chair
Sign labeled: "STATION I - FIRST AID"

II. Set up the station

A. Be sure the students receive actual training before or while setting up the station.

B. Clear an area large enough for students to practice first aid techniques.

C. Place the equipment listed above in a convenient area for the students to use.

D. Use the dolls for mouth-to-mouth resuscitation.

E. Use the alcohol and cotton to clean the dolls' mouths after each student has practiced the "kiss-of-life."

F. Post first aid techniques such as those listed on Reference Sheets #3d, 3e, and 3f.

G. Make copies of first aid techniques available to all the students.

H. Review the instructions with the students before they role-play.

I. Post a copy of the students' instructions (Reference Sheet #3c) and the name of the station.

Reference Sheet #3c
Station I
First Aid

I. Refer to Activity Sheet #1 and to the first aid techniques.

II. Practice first aid techniques with your partner.

III. Use a doll to practice mouth-to-mouth resuscitation. (Be sure to clean the doll's mouth with a cotton swab that has been dipped in alcohol.)

IV. Demonstrate first aid techniques to the class or to your teacher as you feel confident that you know how to handle the emergency situations listed on Activity Sheet #1.

V. Check each first aid technique when your teacher has indicated that you have demonstrated the desired behavior.

Reference Sheet #3d
First Aid

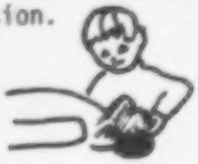
Stress that First Aid techniques are always being improved. Consult with the American Red Cross for the most up-to-date techniques.

Say that according to doctors and the World Book Encyclopedia there are three (3) conditions that are considered as urgent medical emergencies: (1) stoppage of breathing; (2) hemmorage, or severe bleeding; and (3) poisoning. Stress that shock may follow any of these conditions. Explain that all of these emergencies require immediate treatment but a doctor should be called as quickly as possible.

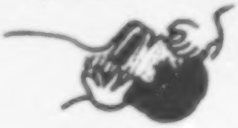
I. Restore Breathing by performing mouth-to-mouth resuscitation.

  A. Remove foreign matter from the victim's mouth.

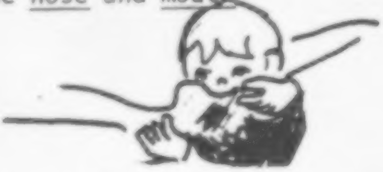
  B. Place the victim on his/her back. Tilt the head back with the chin up. Use one hand to hold the head in this position.



  C. Pinch the nostrils together with your fingers.



  D. Inhale, and place your mouth tightly over the victim's. Blow gently and steadily into the victim's mouth until his/her chest expands. Blow into the nose and mouth of a small child.



  E. Repeat this process in cycles of twelve (12) times a minute for an adult and twenty (20) times for a child.

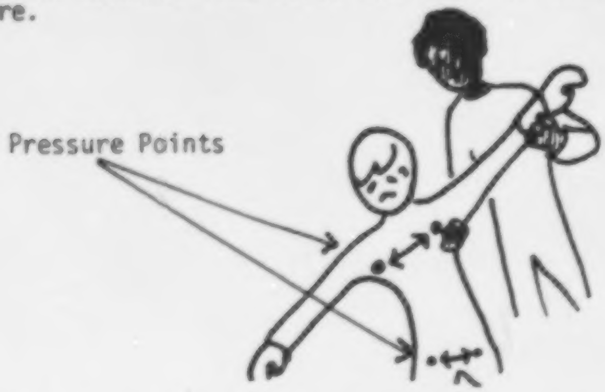
  F. Continue until the victim breathes for himself/herself, the doctor pronounces him/her dead, or he/she is dead beyond all doubt.

II. Follow these steps to control bleeding:

  A. Cover the wound with a folded clean cloth, if available.

  B. Apply pressure directly to the wound. Do not remove the bandage. Do not release the pressure until the doctor arrives or the bleeding has stopped.

C. Elevate the wounded limb above the heart if there is no bone fracture.



D. Continue both the elevation and direct pressure if the bleeding continues from the arm or leg, and apply pressure to the pressure points between the heart and wound. (Release the pressure points when the bleeding stops.)

E. Do not apply a tourniquet except for critical emergencies such as a severed limb.

III. Follow these steps for poisoning:

A. Use the following procedure in all cases of poisoning:

1. Keep the victim quiet, warm, and calm.
2. Give him/her milk or water to drink immediately if he/she is conscious. Have adults drink three (3) or four (4) glasses of liquid to help dilute the poison.
3. Call for help at once.
4. Check the label on the poison for any antidotes.
5. Save the poison container and vomited material.

B. Use the following procedure if the poison is corrosive (lye, acid, drain cleaner) or petroleum based:

1. Dilute stomach content.
2. Do not induce vomiting.

C. Follow these rules for other poison substances; i.e., medicines, mushrooms, etc.:

Reference Sheet #3f

1. Dilute the stomach content.

2. Check the container for first aid and antidote instructions.

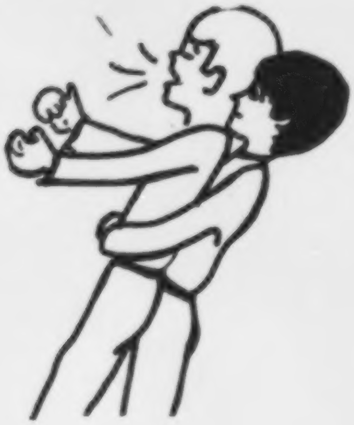
3. Induce vomiting.

IV. Learn other first aid procedures.

V. Follow these steps in case of choking:

   A. Hold a small child with his/her head downward. Pat him/her firmly on the back.

   B. Stand behind a larger person, and give him/her a bear hug by squeezing firmly below the rib cage.



VI. Follow these steps in case of a heart attack:

   A. Help the victim to a comfortable sitting position.

   B. Call for an ambulance with oxygen.

   C. Administer artificial respiration if the victim's breathing has stopped.

   D. Keep the patient warm.

   E. Look for prescribed medication.

Reference Sheet #4
Role-Model

Contact the role-models at least two weeks prior to their visit. Explain what the students expect of them, and give them an idea of what questions the students will be asking. (See below) Be sure to have them bring as many tools as possible and wear their uniforms, if they have any. Follow this contact up with a letter to confirm the date, time, etc. Have the role-models plan to talk about twenty to twenty-five (20-25) minutes and then answer the students' questions. Be certain to tell the role-models that the students want to handle the tools and to try on parts of their uniforms, if possible.

Suggest the following questions to the role-models:

1. Ask, "What is your job?"
2. Say, "Do you like your job?"
3. Ask, "How many hours do you work a day?"
4. Say, "What kind of training have you had?"
5. Ask, "Does anyone check on what you do?"
6. Ask, "What do you like most about your job?"
7. Ask, "What do you like least?"
8. Say, "What tools do you use?"
9. Suggest questions about the model's personal life. (family, hobbies, etc.)
10. Ask, "What are desirable worker characteristics?"

Add more questions to this list for each occupation. Develop the questions with the class prior to the role-models' visit. Let the students write the questions down so that they have something to start with.

Tape-record the role-models' visit for playing at a later time. Take pictures to use when reviewing.

Follow-up their visit by a class discussion.

Send thank-you letters or have the students send them within a day or two after the role-models' visit.

Reference Sheet #5a

A. Place a check (✓) after the names of those students who can administer mouth-to-mouth resuscitation.

B. Place a check (✓) after the names of those students who demonstrated that they knew what to do in each of the following emergency situations.

A. FIRST AID TECHNIQUES		B. EMERGENCY FIRST AID												
Names	mouth-to-mouth resuscitation	for heat exhaustion	for frost bite	for cold exposure	for restorition of breathing	for bleeding	for poisoning	for alcohol or drug overdose	for shock	for burns	for heart attack	for bone and joint injuries	for choking	for heat stroke
1.														
2.														
3.														
4.														
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
13.														
14.														
15.														
16.														
17.														
18.														
19.														
20.														
21.														

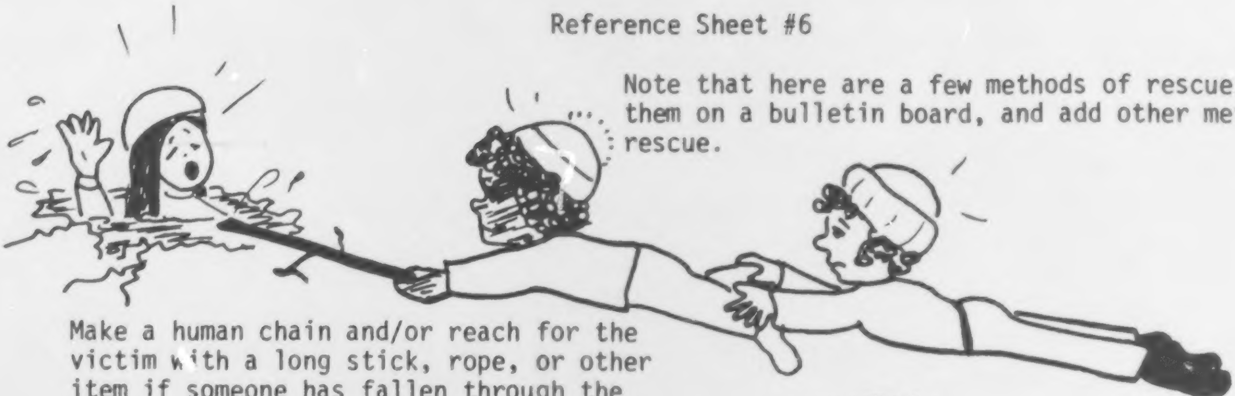
Reference Sheet #5b

Check (√) the appropriate spaces as the students complete the activities for each station.

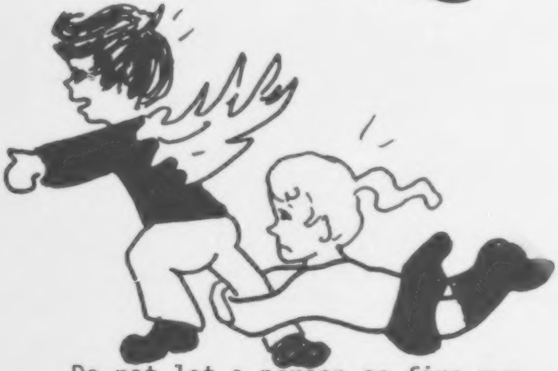
	STATION																			
NAME	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX

Reference Sheet #6

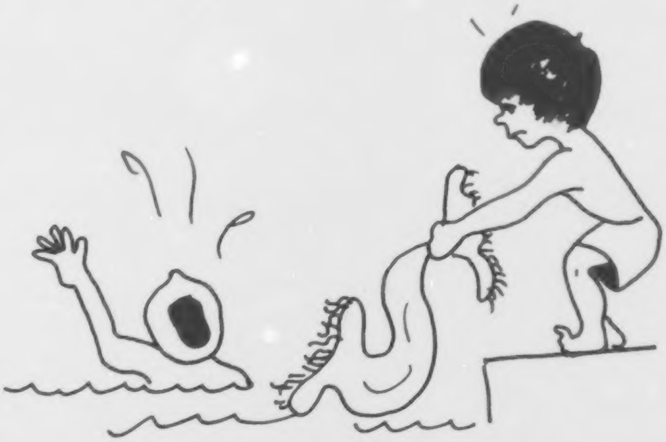
Note that here are a few methods of rescue. Display them on a bulletin board, and add other methods of rescue.



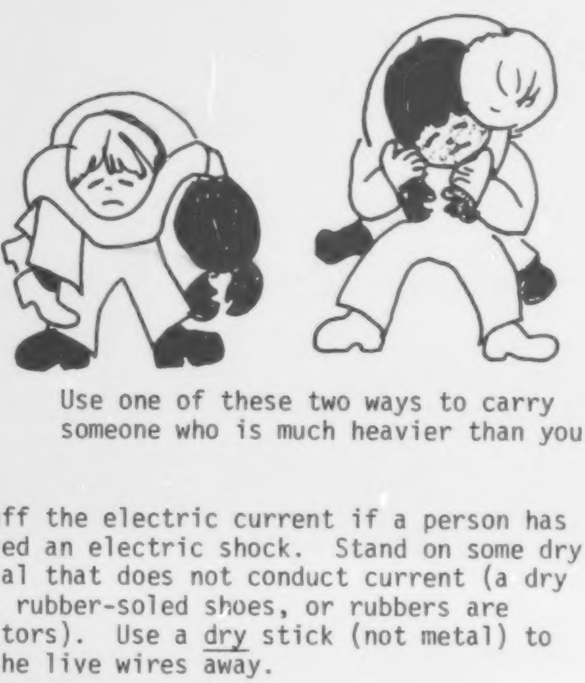
Make a human chain and/or reach for the victim with a long stick, rope, or other item if someone has fallen through the ice.



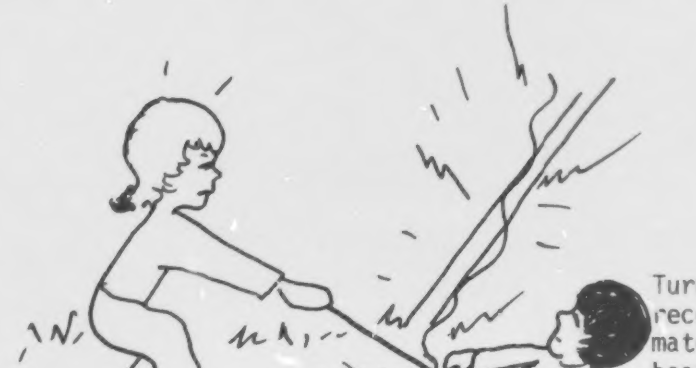
Do not let a person on fire run. Roll him/her on the ground or in a blanket. Try to smother the flames.



Use a towel, stick, toy, or lawn chair to reach the victim. Do not let him/her pull you into the water. Hold on!



Use one of these two ways to carry someone who is much heavier than you.



Turn off the electric current if a person has received an electric shock. Stand on some dry material that does not conduct current (a dry board, rubber-soled shoes, or rubbers are insulators). Use a dry stick (not metal) to move the live wires away.

Reference Sheet #7a
Station II
Admitting Office

I. Obtain the following materials.

Large box, empty 8" x 10" file folders, and alphabetical file separators
Good ink pens or a typewriter and pencils
Holder for pens and pencils
Copies of Activity Sheets #5a and #7a
Strips of heavier paper about 1/2" x 8" (punch holes in the ends of the strips of paper if you use brads)
Stapler and staples or small brads
Two (2) small boxes - one for strips of paper and one for brads or stapler and staples
Desk and two (2) chairs, or table and two (2) chairs
Enlarged copy of the students' instructions (Reference Sheet #7c)
Sign labeled: "STATION II - ADMITTING CLERK"

II. Set up the station.

A. Place the Admitting Clerk's desk and chair in a convenient area of the room. Place another chair in front of or beside the desk.

B. Place the following items on the desk: Typewriter (is possible), copies of Activity Sheets #5a and #7a, two (2) small boxes (one (1) containing strips of paper and the other containing a stapler or brads), and one (1) larger box with file folders.

C. Post a copy of the students' instructions (Reference Sheet #7b) and the name of the station in this area.

Reference Sheet #7b
Station II
Admitting Office

I. Explain to the students that you will be setting up different types of stations in the room. Say that each station will represent a few tasks that might be performed by various hospital workers. Stress that these simulated experiences may not always be accurate, but they are designed to help the students become somewhat familiar with the various types of work. Explain that the experiences should help the students understand how the skills they learn in school are related to the real world of work.

II. Give them a copy of Activity Sheet #7a.

   A. Explain that as they complete the activities posted for each station, they should place a check (✓) in the appropriate spaces. Stress that they are to turn in Activity Sheet #7a when they have completed the activities at all of the stations. Have them keep you informed as they complete each station. (See Reference Sheet #5b)

   B. Explain to the students that they may not always be working in the stations in sequential order; i.e., they may do Station VIII before they do Station V.

III. Review the instructions with the students before they begin role-playing.

IV. Explain that they will be keeping a medical record of their patient (partners). Emphasize that the records must be filed so they can be used later. (Explain that they are to use the cardboard box as a file.)

Reference Sheet #7c
Station II
(Students' Instructions)
Admitting Office)

I. Decide who will role-play the Admitting Clerk and who will role-play the patient first. (Reverse the roles after you have completed the following activities.)

II. Read all of the instructions before you begin.

III. Admit the patient to the hospital.

- A. Ask the patient to be seated.
- B. Fill in only the personal data section of the patient's medical records (Activity Sheet #5a - Parts I and II).
  - 1. Ask the patient only one question at a time.
    - a. Remember to be patient and pleasant.
    - b. Speak in a clear voice.
  - 2. Use the typewriter, if you have one, or use an ink pen.
  - 3. Spell all the words correctly.
  - 4. Keep the record as neat and accurate as possible.
  - 5. Fill in your name as your patient's doctor.
- C. Type or print the patient's name, room number, and bed number on the patient's bracelet. (Make up a room number and bed number; i.e., RM. 182 - 2.)
- D. Fasten this bracelet to the patient's wrist. Use a brad or staple. (Remember that a hospital worker always checks this bracelet before giving a patient any medication or treatment.)
- E. Direct the patient to a lab if he/she needs any tests, or call a nurse to take him/her to his/her room.

IV. Complete the activities for this station.

- A. Write the patient's name (last name first) on the tab of a folder.
- B. Place the patient's medical record in the folder.
- C. File the folder in the correct alphabetical order in the file.

V. Check the correct spaces on Activity Sheet #7a to show that you have completed the activities for Station II.

Reference Sheet #8a
Station III
Hospital Administrator or Director and Assistants

I. Obtain the following materials:

Clipboards (optional)
Pencils or pens (optional)
Six (6) wire baskets or boxes large enough to hold stacks of 8" x 10" papers
Copy of Reference Sheet #8c
Copies of Activity Sheets #6a, 6b, and 6c
Two (2) ADMINISTRATIVE ASSISTANT signs: one (1) labeled "A" and one (1) labeled "B"
Six (6) small signs: three (3) "IN" signs and three (3) "OUT" signs
One (1) sign labeled: "STATION III - HOSPITAL DIRECTOR"

II. Set up the station.

A. Place the baskets on a table or shelf in a convenient place in the room.

B. Attach the "IN" signs to three (3) baskets or boxes and attach the "OUT" signs to the other three (3) baskets or boxes.

C. Place the "ADMINISTRATIVE ASSISTANT A" sign over or by one (1) "IN" and one (1) "OUT" basket. Place Activity Sheet #6a in that "IN" basket or box.

D. Place the "ADMINISTRATIVE ASSISTANT B" sign on a second set of "IN" and "OUT" baskets or boxes. Place Activity Sheet #6b in the "IN" basket or box.

E. Place the "HOSPITAL DIRECTOR'S" sign on a third set of "IN" and "OUT" baskets or boxes.

F. Hang up a copy of the students' instructions in this area.

G. Place the clipboards and pencils near these boxes. (optional)

Reference Sheet #8b
Station III
Hospital Administrator or Director and Assistants

II. Explain to the students that the person in charge of the entire hospital is referred to as the Hospital Administrator or Director. Stress that the Director usually receives general guidance in developing plans and policies from a hospital governing board. Explain that the Administrator or Director directs and co-ordinates the varied activities of the hospital and is responsible for the personnel, finances, equipment, building, and services provided by the hospital. Say that he/she works with the medical and nursing staff to determine the needs for additional equipment and personnel. Stress that the Director or Administrator plans, with the help of his or her business staff, for future expansion needs and for the purchase of equipment and supplies. Explain that the Director, with the help of a Hospital Engineer, is responsible for insuring that the buildings and equipment are properly maintained.

III. Review the instructions with the students.

A. Point out that there are four (4) different assignments.

1. Explain that they will make recommendations for improvement of the building.

2. Say that they will make recommendations for the improvement of procedures and the assignment of personnel.

3. Explain that they will be assigned to work with a staff of four (4) or five (5) other administrators to discuss all the recommendations made by their small group.

4. Say that they will act as the Hospital Director or Administrator as they consider all of the recommendations that they have heard. Explain that they will then make some decisions as to what are the most important changes that need to be made.

B. Be sure they understand that a good administrator must consider many things before making a decision.

Reference Sheet #8c
Station III
(Students' Instructions)
Hospital Administrator or Director and Assistants

I. Read all of the instructions before you begin.

II. Note that a Hospital Director has many people who help him or her by directing workers in a specific area, by making sure that a particular section of the hospital is operating smoothly, and by making recommendations for needed changes or repairs. Observe that there are many types of administrators in a hospital. Note that a head nurse may be responsible for the personnel and operation of a specific floor or ward such as surgery or pediatrics. Observe that the chief engineer is responsible for the personnel who operate and maintain the building, equipment, and grounds. Note that there are other types of administrators who work in the business offices of a hospital. Observe that all of these administrators make specific recommendations to the Hospital Administrator or Director.

III. Pretend you are an Assistant Administrator in a hospital. Remember that one of your responsibilities is to make recommendations for needed changes, improvements, or repairs.

A. Role-play Administrator A.

1. Go to the area designated for Administrator A.

2. Take a copy of Activity Sheet #6a from your "IN" basket.

3. Clip this activity sheet to a clipboard.

4. Read the instructions carefully.

5. Walk around the room to carefully inspect every inch of it. (Note that a good administrator is careful not to disturb the workers.) Complete Section 1.

6. Sit at your desk and think carefully as you complete Section 2.

7. Put Activity Sheet #6a in your "OUT" basket after it is completed.

B. Role-play Administrator B.

1. Go to the area designated for Administrator B.

2. Take a copy of Activity Sheet #6b from the "IN" basket.

3. Work at your desk. Think carefully before completing Activity Sheet #6b.

4. Put the completed Activity Sheet #6b in the "OUT" basket.

Reference Sheet #8d
Station III

IV. Role-play the Administrator or the Hospital Director in a staff meeting situation.

  A. Wait for your teacher to assign you to a particular staff of five (5) to six (6) members who have completed Activity Sheets #6a and #6b.

  B. Get your copies of Activity Sheets #6a and #6b back from your teacher.

  C. Meet with the members of your staff.

    1. Discuss the items listed on your activity sheets.

    2. Take turns telling why you made the recommendations that you did.

    3. Listen to the recommendations made by other members of the staff.

  D. Get a copy of Activity Sheet #6c from the Director's "IN" basket.

    1. Pretend that you are the Director or Administrator in charge of the entire classroom.

    2. Think about all the suggestions made by the members on your staff.

    3. Make final recommendations by completing Activity Sheet #6c.

    4. Place the completed Activity Sheet #6c in the Director's "OUT" basket.

V. Check the correct spaces on Activity Sheet #7a to show that you have completed the activities for Station III.

Reference Sheet #9
Nurses

Registered Nurse

Note that a registered nurse may be assigned to general floor duty, operating room, the obstetrical ward, the delivery room, pediatrics, or any number of other hospital duties.

Explain that a registered nurse may take temperatures, administer medication and hypodermics, change dressings, assist patients with personal care, help prepare a patient for surgery, confer with other members of the medical staff, direct other workers, and do any number of other duties which require skill and an understanding of patients' needs.

Stress that nurses may specialize in such areas as surgery, education, public health, etc.

Licensed Practical Nurse

Note that licensed practical nurses are trained to assist in the care, treatment, and convalescence of mentally and physically ill patients. Explain that whatever their duty, they always work under the direct supervision of professionally trained medical personnel.

Nurses' Aides, Orderlies, and Attendants, or any other auxiliary nursing workers

Note that these workers perform many unskilled jobs around a hospital in the care of the ill and the care of equipment used in the hospital; i.e., bathing patients, running errands, serving meals, and other tasks.

Explain that the services rendered by these workers are those that require less skill and training than those rendered by registered nurses. Say that allowing less skilled workers to do routine jobs frees the registered nurses for the more highly skilled, specialized medical duties.

Reference Sheet #10a
Station IV
Patient's Room

I. Obtain the following materials:

Pencils
Two (2) chairs and a small table
Clipboard
Sign labeled: "PATIENT'S ROOM - STATION IV"
Enlarged copy of the students' instructions (Reference Sheet #10b)
File box with medical records (See Reference Sheets #7a, 7b, and Activity Sheet #5a)
Copies of Activity Sheet #7b

II. Set up the station.

A. Place the chairs and table in a designated area.

B. Place the following on the table: pencils, clipboard, and a file (a box with the medical records and copies of Activity Sheet #7b).

C. Hang up a copy of the students' instructions and the sign, "PATIENT'S ROOM - STATION IV."

III. Explain that the students will not be role-playing the patient being admitted to the room. Stress that they will role-play the patient and the nurse as they complete the patient's medical history (Activity Sheet #5a - Part II).

IV. Review the instructions with the students. (See Reference Sheet #10b)

Reference Sheet #10b
Station IV
Patient's Room

I. Take turns role-playing the patient and the nurse as you and your partner complete the activities for this station.

II. See that the patient is comfortably settled in his/her room. (Seat him/her in one of the chairs.)

III. Look through the files and find your patient's medical record (Activity Sheet #5a).

   A. Put the patient's medical record on the clipboard.

   B. Ask the patient the questions listed on the medical record (Part II).

   C. Fill in the blanks as the patient answers the questions. (Keep the records neat.)

   D. File the medical record after you have completed Part II.

IV. Refer to Activity Sheet #7b. Place a check (✓) in the appropriate space to show that you have completed the activities for Station IV.

Reference Sheet #11a
Station V
Height and Weight

I. Obtain the following materials:

Scales (professional scales if possible)
Tape measure (or the measuring device attached to a professional medical scale)
Class chart - OPTIONAL (Reference Sheet #12)
Activity Sheets #5b and #7b
Tape
Pencil
Sign labeled: "HEIGHT AND WEIGHT - STATION V"
Enlarged copy of the students' instructions (Reference Sheet #11b)

II. Set up the station.

A. Place the scales in a designated area of the room.

B. Tape the tape measure securely to the wall if there is no measuring device attached to the scale.

C. Tape the class chart to the wall (OPTIONAL - think very carefully before doing this. Ask for all of the students' approval. Do not allow anyone to be hurt. Remember that students' height and weight vary so greatly at this age that many may be very self-conscious. Note that it may be better to have the record weight and height, and just indicate whether they are male or female).

D. Place the activity sheets and pencils on a nearby desk or table.

E. Place the sign, "HEIGHT AND WEIGHT - STATION V," in this area.

F. Hang up an enlarged copy of the students' instructions (Reference Sheet #11b)

III. Explain to the students that the nurse is responsible for making specific observations about a patient. Say that he or she is also responsible for accurately recording this information on the patient's record. Explain that the doctor takes this information into consideration when he or she examines and/or diagnoses a patient's condition.

IV. Explain to the students that they will work in pairs and take turns role-playing the patient and the nurse. Tell them to be very careful to fill in the patient's medical record as directed.

V. Review the instructions with the students before they begin role-playing. (See Reference Sheet #11b)

Reference Sheet #11b
Station IV
Height and Weight

Read these instructions carefully before you begin.

I. Choose a partner.

  A. Take turns role-playing the nurse and the patient.

  B. Fill in the patient's medical record as directed. Remember to be very accurate. Do not fill in any blanks unless directed to do so.

II. Check your patient's height.

  A. Record this information on the patient's medical record (Activity Sheet #5b - Part IIIA).

  B. Record this information on the class record chart, Reference Sheet #12, if directed to do so by your teacher.

III. Check your patient's weight.

  A. Record this information on the patient's medical record (Activity Sheet #5b - Part IIIB).

  B. Record this information on the class record chart, Reference Sheet #12, if directed to do so by your teacher.

IV. Refer to Activity Sheet #7b. Check the appropriate spaces to show that you have completed the activities for Station V.

Reference Sheet #12

Teacher______________________ Year______________________

Name (optional)	Height	Weight

Reference Sheet #13a
Station VI
Eye Test

I. Obtain the following materials:

Tape
Pencils
Eye Chart (Check with the school nurse or an eye doctor, or make a chart.)
Piece of paper to cover the eye
Two (2) enlarged color vision charts (See World Book Encyclopedia - "Color Blindness") OR
The encyclopedia
Students' copies of Activity Sheets #5b and #7b (and extra copies)
Three (3) signs: one (1) labeled, "VISION TEST," one (1) labeled, "COLOR BLINDNESS TEST," and one (1) labeled "STATION VI"
Enlarged copy of the students' instructions - (Reference Sheet #13b)
Two (2) chairs
Small table or desk

II. Set up the station.

A. Tape the large eye chart on the wall near the table.

B. Hang the sign, "VISION TEST," over this chart.

C. Place a piece of tape on the floor twenty (20) feet from the chart.

D. Place the two (2) chairs by the table or desk.

E. Place the following on the table or desk: pencils, color eye charts or book containing the charts, copies of Activity Sheets #5b and #7b, and the small pieces of paper to be used to cover the eyes.

F. Hang the sign "COLOR BLINDNESS TEST," over the desk.

G. Hang the sign, "STATION VI," between the two (2) areas described above.

H. Post a copy of the students' instructions (Reference Sheet #13b) by the "STATION VI" sign.

III. Review the instructions with the students.

IV. Explain to the students that if a person can read letters of the size normal for a person twenty feet away, his/her vision is recorded or expressed as 20/20. Say that if, at twenty (20) feet, he/she can read only the letters that the normal eye can see at forty (40) feet, he/she has 20/40 vision. Explain that a person who can see letters from twenty (20) feet that the normal eye can see only from fifteen (15) feet has 20/15 vision. Tell them that if they look closely at the line read by the patient, they will see the numbers that should be recorded on the patient's medical records; i.e., 20/20.

Reference Sheet #13b
Station VI
Eye Test

I. Be sure you and your partner take turns role-playing the patient and the nurse.

II. Test for visual accuracy.

A. Have the patient stand on the marked line.

B. Have the patient remove his/her glasses if he or she is wearing any.

C. Ask him/her to place the piece of paper over the right eye.

1. Ask the patient to read aloud the letters that he/she can recognize.

2. Look at the small numbers written after the last line read by the patient.

3. Record these numbers on the patient's medical records (Activity Sheet #5b - Part V-A-1 - left eye).

D. Ask the patient to cover the left eye and repeat the instructions listed above, but record the results in the space for the right eye.

E. Repeat this same procedure if the patient wears glasses, but record the results on the patient's medical record (Part V-A-2).

III. Test for color vision.

A. Ask the patient to look at the color vision chart on the left in The World Book Encyclopedia (or on chart #1).

1. Ask the patient to describe what he/she sees.

2. Place a check (✓) on the patient's medical record (Activity Sheet #5b - Part V-B-1) by the "YES" if he/she can see a green circle and a yellow X, or the "NO" if he/she can not see the green circle and yellow X.

B. Ask the patient to look at the color vision chart on the right (or on chart #2).

1. Ask the patient to describe what he/she sees.

2. Place a check (✓) on the patient's medical record (Part V-B-2) by the "YES" if he/she can see the green circle and triangle or by the "NO" if he/she cannot see the green circle and triangle.

IV. Refer to Activity Sheet #7b. Check (✓) the appropriate spaces to show that you have completed the activities for Station VI.

Reference Sheet #14a
Station VII
Hearing Test

I. Obtain the following materials:

A machine to test hearing or a tape recording of three (3) levels of sound (very soft, normal, loud)
A tape player and two (2) pairs of ear phones
Tape
Pencils
Students' copies of Activity Sheets #5b and #7b
An enlarged copy of the students' instructions (Reference Sheet #14b)
Sign labeled: "HEARING TEST - STATION VII"
A small table or desk
Two (2) chairs

II. Set up the station.

A. Place the two (2) chairs by the table.

B. Place the following on the table: the equipment to test hearing, pencils, and activity sheets.

C. Hang the sign, "HEARING TEST - STATION VII."

D. Hang the students' instructions (Reference Sheet #14b) in this area.

III. Allow the students to work in pairs.

IV. Instruct the students on the operation of the machinery.

V. Review the instructions with the students.

Reference Sheet #14b
Station VII
Hearing Test - Students' Instructions

I. Be sure you and your partner take turns role-playing the nurse and the patient.

II. Ask the patient to sit at the desk.

   A. Explain to the patient that he/she should listen for a sound that you will play for him/her.

      1. Turn the tape or machine loud enough for the patient to hear the sound.

      2. Say that he/she should listen through earphones for this same sound; a soft, a medium, and a loud sound.

      3. Tell the patient to raise his/her hand each time he/she hears the sound.

   B. Test the patient's hearing in one ear at a time.

      1. You should wear one pair of earphones so you can hear the sounds.

      2. Have the patient put one earphone lightly against his/her right ear.

      3. Play the three (3) sounds for the patient.

   C. Refer to the patient's medical record (Activity Sheet #5b, Part VI-A-1).

      1. Place a check (✓) by the "YES" if the patient heard all three (3) sounds.

      2. Place a check (✓) by the "NO" if the patient did not hear all three (3) sounds.

   D. Test the patient's left ear in the same manner and record the results on the patient's medical record (Part VI-A-2).

III. Refer to Activity Sheet #7b. Check (✓) the appropriate spaces to show that you have completed the activities for Station VII.

Reference Sheet #15a
Station VIII
Temperature, Pulse and Respiration

I. Obtain the following materials:

Oral thermometers brought by a few students for everyone to read
A watch with a second hand or the school clock
Students' copies of Activity Sheets #5c and #7b (File)
Enlarged copy of the students' instructions (Reference Sheets #15b and #15c)
Sign labeled: "TEMPERATURE, PULSE, AND RESPIRATION - STATION VIII"
Pencils
Paper
One (1) chair
A small table or desk

II. Set up the station.

A. Place the chair by the table or desk.

B. Place the following on the table: the watch (if you so desire), the activity sheets, and the pencils.

C. Hang the sign, "TEMPERATURE, PULSE, AND RESPIRATION - STATION VIII," in this area.

D. Hang the students' instructions (Reference Sheets #15b and #15c) in this area.

III. Allow the students to work in pairs.

IV. Stress the importance of these vital signs.

A. Say that the readings must be recorded accurately.

B. Explain that the doctor considers these readings when determining the patient's condition.

C. Tell the students that a patient's "vital signs" are taken several times during the day and recorded on the patient's chart. Say that these signs tell the doctor more about the patient's condition.

V. Review the instructions with the students.

Reference Sheet #15b
Station VIII

Temperature, Pulse & Respiration
Students' Instructions

I. You and your partner should take turns role-playing the nurse and the patients.

II. Ask the patient to sit at the desk.

   A. Take the patient's temperature. (Do this only if the patient has his/her own thermometer.

      1. Hold the upper part of the thermometer firmly between the thumb and fingers. Hold the bulb end downward.

      2. Bring your hand up sharply and then with a snap of your wrist bring it down again. (Be very careful not to hit or drop the thermometer.)

      3. Shake the thermometer until the column of mercury shakes down to a point just below the 94° F or 34.5° C reading on the scale.

      4. Place the thermometer in the patient's mouth. Ask him/her to hold it gently beneath the tongue. Explain to the patient not to bite the thermometer.

      5. Read the thermometer by holding it at eye level and turning it slowly back and forth until the markings on the scale can be clearly seen. (Note that it is best to have your back to the light.) Observe that the long lines represent degrees and the shorter lines represent two-tenths of a degree.

      6. Record the temperature on the patient's chart (Activity Sheet #5c - Part VIII-A).

      7. Note that a temperature of 98.6° F or 37° C is considered average. (Decide if your patient's temperature is average.)

   B. Take the patient's pulse.

      1. Place your index finger on the inside portion of the patient's wrist. Do not use your thumb.

      2. Find an area on the wrist where you can feel a rhythmic movement or beating.

      3. Count the number of beats during a one minute period. (Use a watch or a clock with a second hand.)

4. Record this information on the patient's medical record (Activity Sheet #5c, Section VIII-B).

5. Note that the average pulse rate for a person between the ages of eight (8) and fifteen (15) is between 80-86 beats per minute. (Decide if your patient's pulse-rate is average.)

6. Ask the patient to run in place for sixty (60) seconds.

   a. Take the patient's pulse again.

   b. Record this information on your patient's medical record (Activity Sheet #5c, Section VIII-C).

C. Find the patient's respiration rate.

1. Count the number of breaths your patient takes in a one (1) minute period. (Count each time his/her chest rises.)

2. Record this number on the patient's medical record (Activity Sheet #5c, Section VIII-D).

3. Ask the patient to run in place for one (1) minute.

   a. Count again the number of breaths taken by the patient for one (1) minute.

   b. Record this information on the patient's medical record (Section VIII-E).

II. Refer to Reference Sheet #7b. Check (✓) the appropriate spaces to show that you have completed the activities for Station VIII.

Reference Sheet #16a
Station IX

Blood Pressure

Note that this station should be taught under the direct guidance of a person qualified to take blood pressure readings.

I. Obtain the following materials:

Sphygmomanometer
Stethoscope
Pencil
Chair and a flat surface like the teacher's desk or a table
Copies of Activity Sheets #5c and #7b (See the file)
Copies of Reference Sheets #16c and #16d
Enlarged copy of the students' instructions (Reference Sheets #16c and #16d)
Sign labeled: "BLOOD PRESSURE - STATION IX"

II. Set up the station.

A. Place a chair adjacent to a table or other area with a flat surface.

B. Place the sphygmomanometer and stethoscope on the flat surface of the table or desk.

C. Place the following items on the desk also: extra copies of Activity Sheets #5c and #7b, copies of Reference Sheet #16c and #16d and pencils.

D. Hang the sign, "BLOOD PRESSURE - STATION IX," in this area.

E. Hang the enlarged copy of the students' instructions (Reference Sheets #16c and #16d) in this area.

III. Review the instructions with the students before they begin role-playing (See Reference Sheets #16c and #16d) Emphasize the importance of their being very careful while they use this instrument. (Practice using the instrument before instructing the students on how to use it.)

IV. Review these facts with the students.

A. Explain that the blood pressure is the force exerted against the vessel walls by the blood.

B. Say that the systolic pressure is the highest degree of blood pressure and the diastolic pressure is the lowest degree. Explain that the pulse pressure is the difference between systolic and diastolic pressure.

Reference Sheet #16b
Blood Pressure

C. Say that normal blood pressure is approximately 120/80mm. Hg. Explain that as age increases the blood pressure becomes higher.

D. Stress that in shock and hemorrhage, the blood pressure will be lowered. Say that exercise, emotion, and diseases increase blood pressure.

E. Explain that the left arm should be used, if possible, for taking blood pressure.

F. Say that the systolic reading should be taken when the sound first becomes audible as the cuff is deflated. Say that the diastolic reading is taken when the sound changes from sharp to soft just before it disappears.

G. Say that the systolic reading is recorded above the line 120/ and the diastolic reading is recorded below the line /80.

Reference Sheet #16c
Station IX

Blood Pressure
Students' Instruction

I. Be sure that you and your partner take turns role-playing the nurse and the patient.

II. Take the patient's blood pressure.

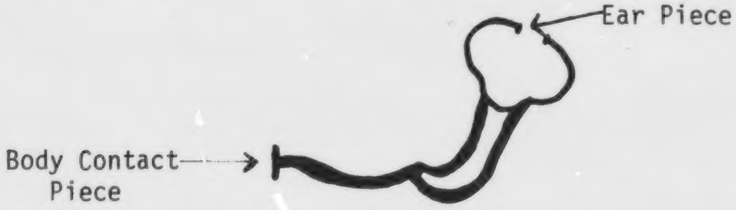
A. Have the patient sit with one arm relaxed and supported on a low table.

B. Place the sphygmomanometer on the table, and turn it so you are able to see the measuring scale easily.

C. Instruct the patient to keep his/her hand in a relaxed position.

D. Gently wrap the cuff or armband around the upper portion (the muscle) of the patient's left arm. Be sure it fits loosely! Try to keep the rubber tubes from crossing or coming in contact with each other. Note that this creates sounds that will interfere with the blood pressure reading.

E. Place the stethescope to your ears with the body contact piece against the inside part of the patient's arm where it bends. (See the illustration.)



F. Place the stethescope on the spot where the pulse beat is the strongest.

G. Hold the rubber bulb in one hand, and turn the screw at the bottom of the bulb with the fingers and thumb of that same hand.

Reference Sheet #16d
Station IX
Blood Pressure
Students' Instructions

G. Squeeze the rubber bulb until you can no longer hear the pulse or beat. (Be careful not to pump this up too far or leave it on too long.)

H. Let the air out slowly (turn the screw carefully) until you can hear the beat again. Remember this number on the gauge - this is called the systolic reading or highest pressure. Practice this activity a few times so you can do it correctly.

I. Continue slowly letting the air out until you can no longer hear the pulse, or beat. Note that the lowest number on the gauge at which you can hear the beat is the diastolic or lowest degree of pressure. Remember this number also. Practice this activity a few times so you can do it correctly.

J. Record on the patient's medical record (Activity Sheet #5c - Part VIII-F) the highest reading, or numeral, and the lowest reading, or numeral, like this 120/80. Note that it is read "120 over 80." Remove the cuff from your patient's arm.

III. Return the equipment to its proper place.

IV. Refer to Activity Sheet #7b. Check (✓) the appropriate space to show that you have completed the activities for Station IX.

Reference Sheet #17a
Station X

Injection (Shots)

Note that this capsule is optional. You should consider what effects this capsule might have on your student population or on the community.

I. Obtain the following materials:

Medium size tray or a very small tray
Jar of water
Disposable hypodermic needles and syringes
Cotton balls
Container for cotton balls
Alcohol (or alcohol bottle filled with water)
Oranges or rubber balls with firm centers
Box to hold oranges or balls
Wastepaper basket
Two (2) towels
Copies of Activity Sheets #5d and #7b
Enlarged copy of the students' instructions (Reference Sheets #17c and #17d)
Sign labeled: "INJECTIONS - STATION X"
A chair
A small table or desk

II. Set up the station.

A. Place the table, the chair, and the wastepaper basket at this station.

B. Place the following items on the tray: a towel to cover the bottom of the tray, the container filled with cotton balls, the alcohol (or alcohol bottle filled with water), the disposable syringes, and a towel to cover the items on the tray.

C. Place the following items on the table: the filled tray, the box filled with oranges or balls, and extra copies of the students' Activity Sheets #5d and #7b.

D. Hang the sign, "INJECTIONS - STATION X," in this area.

E. Hang the enlarged copy of the students' instructions (Reference Sheets #17c and #17d) in this area.

III. Review the instructions with the students.

IV. Review these facts with the students.

A. Note that today most hypodermic needles are disposable.

B. Stress that an "injection" is defined as "the forcing of a fluid into a cavity, the tissues, or a blood vessel thorugh a hollow tube or needle.

Reference Sheet #17b
Station X

Injection (Shots)

C. Say that hypodermic syringes are calibrated in cubic centimeters and minims (the smallest unit of liquid measure - roughly equivalent to a drop) for accurate measurement.

D. Explain that special syringes are made for insulin and tuberculin.

  1. Say that the insulin syringe is calibrated in units.

  2. Say that the tuberculin syringe is calibrated in tenths and hundredths of a cubic centimeter because the drug is given in minute amounts.

E. Stress that a nurse must always identify a patient before giving a medication.

  1. Say that the nurse repeats the patient's name clearly and distinctly.

  2. Explain that the nurse checks the patient's name on the identification bracelet which is fastened to the patient's arm when he/she enters the hospital.

F. Tell the students that drugs are injected intravenously if a very rapid action is desired for certain diagnostic tests or if the drug cannot be tolerated when given by other methods.

G. Explain that a drug should not be administered hypodermically without first expelling all the air from the syringe and the needle.

H. Say that when a needle has been fully inserted the plunger should be withdrawn slightly to make sure the needle is not in a blood vessel. Explain that if there is blood in the lower part of the syringe, this indicates that the point of the needle is in a blood vessel.

I. Explain that student nurses use oranges to practice giving injections.

J. Say that an injection hurts less if it is given correctly.

K. Explain that an injection must be administered under very sterile conditions.

IV. Use the syringe and needle to refill the vial with water. (Note that this is done in much the same manner that an injection is given. Note that this would be an interesting science experience for the students. Let them discover that the air must be removed from the vial before the water can be injected. Have them discuss why.)

Reference Sheet #17c
Station X

Injection (Shots)
Students' Instructions

I. Note that you will need to record some information on your patient's medical record. Observe that you will not be giving medicine to the patient but to an orange or a ball.

II. Practice giving an injection.

A. Remove the towel from the top of the tray.

B. Firmly hold a cotton ball on the opened top of the alcohol bottle. Wet the cotton ball by turning the bottle upside down and then back up. (Be sure to replace the lid on the bottle.)

C. Remove a sterile syringe and needle from the container. Place it on the small tray so the needle is laying on the alcohol sponge (the cotton ball that was dipped in alcohol).

D. Cleanse the top of the vial with another alcohol sponge.

E. Draw air into the syringe to equal the amount of solution to be given.

F. Hold a disposable needle and syringe in one hand and the vial of medicine in the other.

1. Insert the needle into the center of the diaphragm (rubber top) of the vial.

2. Hold the vial vertically, and force air from the syringe into the vial by pushing the plunger all the way down.

3. Withdraw the solution by pulling out the plunger until the syringe is filled to the desired dosage (in this case to the 2 c.c. mark)

4. Hold the syringe and plunger firmly, and keep it level as you remove the needle from the bottle.

5. Place the syringe and the needle back on the tray. (Be sure the needle rests on the alcohol sponge.)

G. Use an alcohol sponge to wipe the skin (the orange) in the area you will be giving the injection.

1. Hold the syringe and plunger steady, and insert the needle.

2. Hold the syringe firmly at a 45° angle, and pull the plunger up a short distance to make sure you do not have the needle in a blood vessel. (Note that you will see blood in the syringe if the needle is in a blood vessel.)

3. Quickly push the plunger all the way in.

Reference Sheet #17d
Station X
Injection (Shots)
Students' Instructions

4. Place the cotton ball over the area where the needle entered the skin. Quickly remove the needle.

5. Gently massage the area with the alcohol sponge (the cotton ball).

H. Pretend you are throwing the disposable needle away, but place it back on the tray.

I. Clean up the area.

1. Put the material and equipment back in their proper places.

2. Throw away the cotton balls.

3. Wipe up the area before leaving it.

III. Refer to the patient's medical record (Activity Sheet #5d, Part X - "Nurse's Notes").

A. Record the time and date.

B. Record the amount and the type of medicine administered. (Use H_2O to indicate the type of medicine.)

IV. Refer to Activity Sheet #7b. Check (✓) to show that you have completed the activities for this station.

Reference Sheet #18

Name	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180

Have the students record their pulse rates.

1. Ask them to write their names in the spaces provided.
2. Let them color in the correct number of spaces to indicate their pulse rates.

Reference Sheet #19

	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80

Have the students record their respiration rates.

1. Ask them to write their names in the spaces provided.
2. Let them color in the correct number of spaces to indicate their respiration rates.

Reference Sheet #20a
Station XI

Physical Examination
(Eyes, Ears, Nose, and Throat)

I. Obtain the following materials:

Pin light (a small flashlight)
Tongue depressors in a jar
Two (2) chairs or one (1) tall stool
Table or desk
Enlarged copy of the students' instructions (Reference Sheets #20c, 20d, and 20e)
Copies of Reference Sheets #20c, 20d, and 20e
Copies of Activity Sheets #5b and #5c (See the file)
Copies of Activity Sheet #7b
Sign labeled: "PHYSICIAN - STATION XI - EYES, EARS, NOSE, AND THROAT"

II. Set up the station.

A. Place the two (2) chairs opposite each other.

B. Place the table beside the chair to be used by the doctor.

C. Place the following on the table: the light, the jar with the tongue depressors, Activity Sheets #5b, 5c, and 7b, and Reference Sheet #19c.

D. Hang the sign, "PHYSICIAN - STATION XI - EYES, EARS, NOSE, AND THROAT," in this area.

E. Post a copy of the students' instructions (Reference Sheets #20c, 20d, and 20e).

Reference Sheet #20b
Station XI

Physical Examination

II. Explain to the students that the observations made during the examinations of the patient are extremely important. Tell them that these observations are recorded on the patient's medical records. (Remind them that the medical history is started by the admitting clerk when the patient enters the hospital. Stress that the nurse or nurse's aide adds to this record when the patient is brought to the room.)

   A. Explain that the doctor may learn that a patient comes from a family whose members are subject to such disorders as nephritis, diabetes, tuberculosis, etc.

   B. Say that the doctor may observe that the patient is subject to certain occupational hazards; i.e., inhalation of dust particles, lead poisoning, mental strain, etc.

   C. Stress that the doctor may learn that the patient has just experienced profound emotional shock.

III. Tell the students that they are going to have the opportunity to role-play a doctor giving an examination.

   A. Explain that they will do only a very small part of an examination.

   B. Stress that they will be using the scientific skills of observing, drawing conclusions, recording findings, etc.

   C. Tell them that, unlike the doctor, they will have the patient move to a different station for the second half of the examination. (Explain that this move is to make better use of the equipment available.)

IV. Review the instructions with the students.

   A. Explain that they will be working in pairs as they take turns role-playing the doctor and the patient.

   B. Stress that it is very important that they follow instructions carefully.

   C. Explain how important it is to record their observations accurately.

   D. Tell the students that they should read and understand the instructions before they begin.

   E. Review the vocabulary with the students; i.e., cyanotic, symptoms, jaundice, etc.

   F. Let the entire class do this assignment at the same time if you have enough small flashlights.

Reference Sheet #20c
Station XI

Physical Examination
Students' Instructions

I. Be sure that you and your partner take turns role-playing the doctor and the patient.

   A. Observe that you will need the patient's medical records (Activity Sheets #5b and #5c and Reference Sheet #7b).

   B. Note that you will be responsible for recording certain information on the patient's medical records.

   C. Use Activity Sheet #7b, and check (✓) the activities as you complete them.

II. Have the patient sit on a chair or stool.

III. Record the patient's name (your partner's), the doctor's name (yours), and the date on the top of the patient's medical record (Activity Sheet #5b).

IV. Observe the patient's face.

   A. Look for any signs of swelling, cuts, or bruises.

   B. Observe the skin coloring (pale - no color, cyanotic - bluish tinge expecially around the mouth, flushed - cheeks quite pink, or jaundiced - yellowish.)

   C. Learn if the patient can move his/her head with ease.

   D. Notice if there is any muscle spasms or twitching.

   E. Determine if his or her facial expression seems to show fear, worry, pain, fatigue, or other suggestive symptoms.

   F. Record your observations (in simple terms) on the patient's medical record (Activity Sheet #5b - Part IV).

V. Examine the patient's eyes.

   A. Check his/her sensitivity to light by shining a very small flashlight in the patient's eyes. Note that illness increases light sensitivity. (Observe that the doctor uses a special instrument to examine the eyes.)

   B. Discover if the patient's eyes are red, swollen, or have dark circles under them.

Reference Sheet #20d
Station XI

Physical Examination
Students' Instructions

C. Observe the pupils. See if they are contracted or dilated. Check whether they are equal or unequal in size.

D. Observe whether the whites of the eyes appear clear, red, or yellow. Look for any growths on them.

E. Determine if the patient complains of any itching or pain.

F. Notice if there is any discharge.

G. Record your observations on the patient's medical record (Activity Sheet #5b - Part V-C).

VI. Use the light to examine the inside of the patient's ears. Feel around in front of and behind the patient's ears.

A. Notice if there is any discharge or swelling.

B. Determine if the patient complains of any pain, itching, or tenderness around his/her ears.

C. Determine if the patient complains about tinnitus (ringing in the ears).

D. Record your observations on the patient's medical record (Activity Sheet #5b - Part VI-B).

VII. Examine each of the following organs:

A. Use the light to examine the patient's throat.

1. Press down carefully on the patient's tongue with the tongue depressor. Notice if there is any redness, swelling, discharge, hoarseness, or difficulty in swallowing.

2. Observe whether the patient has any tonsils. Determine if the tonsils have any white spots on them or if they are healthy.

3. Throw the tongue depressor in the wastebasket when you are through examining the patient's throat.

B. Observe the patient's nose.

1. Notice if there is any discharge, swelling, reddish coloring, or difficulty in breathing.

2. Check if there is a loss of the sense of smell.

C. Observe the lips for color (pale or cyanotic); appearance (dry, cracked, or swollen); presence of sores; etc.

Reference Sheet #20e
Station XI

Physical Examination
Students' Instructions

D. Notice the condition of the teeth (good, loose, decayed, showing lack of care, etc.).

E. Notice the odor of the breath (sweet, sour, alcoholic, etc.).

F. Observe the mouth and gums.

   1. Watch for the presence of pus, infection, swelling, bleeding, etc.

   2. Observe whether the color is pale or very red.

G. Notice the color of the tongue (scarlet, normal, pale, brown or gray with furred appearance, etc.)

   1. Note if it is coated.

   2. Watch for patches, sores, or scars.

H. Record your finding in the correct spaces on your patient's medical records (Activity Sheet #5c - Part VII - A, B, C, D, E, F, and G).

VIII. Refer to Activity Sheet #7b. Check (✓) the appropriate spaces to show that you have completed the activities for Station XI.

Reference Sheet #21a
Station XII

Heart, Lungs, and General Examination

I. Obtain the following materials:

Reflex hammer
Stethoscope
Two (2) chairs or one (1) tall stool
Table or desk
Enlarged copy of the students' instructions (Reference Sheet #21b)
Copies of Reference Sheet #21b for each student
Copies of Activity Sheets #5c and #7b for each student
Sign labeled: "PHYSICIAN - STATION XII - HEART, LUNGS, AND GENERAL EXAMINATION"

II. Set up the station.

A. Place the two (2) chairs opposite each other.

B. Place the table or desk beside the chair to be used by the doctor.

C. Place the following on the table: the stethoscope, Activity Sheets #5c and #7b (the same ones that the students used at Station XI, and Reference Sheet #7b)

D. Hang the sign, "PHYSICIAN - STATION XII - HEART, LUNGS, AND GENERAL EXAMINATION," in this area.

E. Post a copy of the students' instructions (Reference Sheet #21b) in this area.

III. Explain to the students that they will continue the patient's examination at this station. (Remind them that by moving, they let more students work at one time.)

IV. Review the instructions with the students. (Encourage them to refer to Activity Sheets #14a and #14b which describe what the physician looks for as he/she examines a patient.)

Reference Sheet #21b
Station XII

Heart, Lungs, and General Examination
Students' Instructions

I. Listen to your patient's heart.

A. Place the earpieces of the stethoscope to your ears.

B. Place the body contact piece against the patient's chest.

C. Listen to the heart beat. Determine if the beat seems strong or weak. Decide if the rhythm or beat of the heart sounds even.

II. Listen to the sounds in the patient's chest.

A. Examine the patient by percussion.

1. Place a finger of your left hand firmly against the patient's back, and tap it smartly with the fingertips of your right hand.

2. Note that various sounds suggest different conditions in the area examined. Observe that these sounds may be symptoms of an abnormal condition.

B. Examine the patient by auscultation.

1. Place the stethoscope against the patient's back and chest. Listen to sounds from within.

2. Have the patient take a deep breath and let it out slowly. Note what you hear.

3. Have the patient hold his/her breath and listen carefully. Note what you hear.

III. Check the patient's reflexes.

A. Seat the patient in a chair with his/her legs crossed, or seat the patient on the edge of a table with his/her feet not touching the floor.

B. Use the reflex hammer to gently strike the area just below the knee.

C. See if the patient's leg jumped a little. (Note that if it didn't, there may be a problem of nerve function or of muscular activity.)

IV. Record your observations on the patient's medical record (Activity Sheet #5c - Part IX).

V. Refer to Activity Sheet #7b. Check (✓) the appropriate spaces to show that you have completed the activities for Station XII.

Reference Sheet #22a
Station XIII

Emergency Room - Cast

I. Obtain the following materials:

Plaster cast (gauze-like material used by doctors when putting a cast on a broken bone) (You will need enough plaster cast, cotton, and material to cover each student's thumb.)
Small bucket of water
Soft material; i.e., old diapers, cotton, cloth, etc.
Chair
Scissors
Black magic marker
Newspapers (to protect the floor or desk top)
Sponge (to keep the area clean)
Copies of Activity Sheet #7b and Reference Sheet #22b
Sign labeled: "EMERGENCY ROOM - CAST - STATION XIII"

II. Set up the station.

A. Place copies of Reference Sheet #7b in this area for students who may have misplaced their original copies.

B. Place a chair at this station for the "patient" to sit in while his/her cast is being applied by the "doctor."

C. Place the box containing the cotton the material, the plaster cast, and the scissors, close to the chair.

D. Place the newspaper and the sponges at this station.

E. Place near the chair a small bucket of water in which the doctor may dip the plaster cast before applying it.

F. Hang up the sign labeled "EMERGENCY ROOM - CAST - STATION XIII," in this area.

G. Hang up the enlarged copy of the students' instructions (Reference Sheet #22b) in this area.

III. Review the students' instructions for this station with the students before they begin role-playing. (See Reference Sheet #22b)

IV. Explain to the students that the emergency room is not the only room in which a doctor may apply a cast. Tell them that the doctor depends on the X-ray technician to make X-rays so he/she will know whether a bone is broken and where it is broken.

Reference Sheet #22b
Station XIII

Emergency Room
Students' Instructions

I. Be sure that you and your partner take turns role-playing the patient and the doctor.

II. Apply a cast to your patient's finger.

   A. Wrap soft material around the patient's thumb. (Add a little cotton for padding.)

   B. Dip small strips of plaster cast into the bucket of water until the strips are soft. (Becareful not to leave them in the water too long.)

   C. Wrap strips of the plaster cast around the patient's thumb. Do not wrap tightly because it will be removed when dry and hard. Gently smooth the plaster on the cast until it looks neat.

   D. Clean the area for the next patient while waiting for the first patient's cast to dry.

   E. Remove the dry cast from the thumb. Print the patient's name on the cast, and set it aside. (Let the patient have his/her classmates autograph the cast.)

III. Refer to Activity Sheet #7b. Check (✓) the appropriate spaces to show that you have completed the activities for Station XIII.

Reference Sheet #23a
Station XIV

Taking Care of a Wound

I. Obtain the following materials:

- Alcohol (or bottle of water marked alcohol)
- Cotton balls (in a glass jar)
- Embroidery frame
- Scissors
- Pieces of inner tube or strong cloth
- Curved upholstery needles - various sizes
- Wastebasket
- Needle-nosed pliers or a tool with which to grip the needle
- Table and chairs
- Tray and two (2) towels
- Sign labeled: "EMERGENCY ROOM - WOUNDS - STATION XIV"
- Copies of Reference Sheet #23b and Activity Sheet #7b (if needed)
- Enlarged copy of the students' instructions (Reference Sheet #23b)

II. Set up the station.

A. Cut the rubber inner tube (or cloth) into pieces small enough to fit into a small embroidery frame. (Let two students use the same piece.)

B. Make a small cut about 1" long in each piece of rubber.

C. Place the chairs opposite each other.

D. Place the wastebasket and table beside the chair in which the "doctor" will sit.

E. Place the following on the tray: a towel (a white dish towel is best), a small covered jar containing cotton balls, a bottle of alcohol (water), scissors, catgut (thread), needles (upholstery needles), and forceps (needle-nosed pliers).

F. Cover the tray with the other towel.

G. Place the tray on the table next to the doctor's chair.

H. Place the stacks of pre-cut inner tube pieces and the embroidery hoops beside the tray.

I. Hang the sign, "EMERGENCY ROOM - WOUNDS - STATION XIV," in this area.

J. Hang up an enlarged copy of the students' instructions (Reference Sheet #23b).

III. Review the instructions for this station with the students before they begin role-playing. (See Reference Sheet #23b)

IV. Explain that a nurse or doctor would usually give an injection, or "shot," to deaden the pain before stitching the wound.

Reference Sheet #23b
Station XIV

Taking Care of a Wound
Students' Instructions

I. Do the following before you begin:

A. Place a piece of inner tube or cloth over the smaller embroidery hoop.

B. Place the large hoop over the inner tube and smaller hoop. (Tighten it by turning the screw on the larger hoop. Note that some hoops do not have a screw.)

II. Prepare to stitch.

A. Wash your hands well, or pretend to wash them if water is not available. Pretend you are putting on sterile gloves.

B. Remove the sterile towel covering the tray.

III. Stitch the wound.

A. Take a cotton ball, place it on top of the alcohol bottle, hold it firmly, and tip the bottle to get the cotton ball wet.

B. Carefully wipe the wound with the wet cotton ball.

C. Choose a needle and thread that you feel will make neat stitches. Hold the needle with the forceps (pliers). Thread the needle, but do not put a knot in the end. Use the forceps to push the needle through the skin (inner tube or cloth) on one side of the wound and up through the skin on the other side of the wound. Use the forceps to pull the needle through. (Note that you must always work from the top. Remember that you cannot work on the under side of a wound.) Do not pull the thread all the way through; leave about 6" on the other side of the wound.

D. Cut the thread about 6" from the wound. Tie the ends together over the wound and cut the remaining thread fairly close to the knot. (Be sure to leave it long enough so that it will not come untied.)

E. Make as many stitches as needed to close the wound.

V. Clean up the area.

A. Put the material and equipment back in their proper places.

B. Wipe up any spills.

C. Cover the tray with the cloth.

VI. Refer to Activity Sheet #7b. Check (✓) the appropriate spaces to show that you have completed the activities for Station XIV.

Reference Sheet #24
Physician

Specialists:

Many doctors specialize in certain fields of medicine. Below are listed several special kinds of doctors.

Pediatrician - A doctor who specializes in the care of children

Obstetrician - A doctor who specializes in the delivery of babies and the care of pregnant mothers.

Anesthesiologist - A doctor who specializes in the study of anesthetics and the administration of an anesthetic to a person who is having an operation

Orthopedist - A doctor who specializes in the bones of the body and in bone surgery

Internist - A doctor who specializes in internal medicine dealing with the kidneys, stomach, etc.

Pathologist - A doctor who specializes in laboratory testing and usually heads a laboratory

Neurosurgeon - A doctor who specializes in brain surgery and diseases of the brain and nerves

Reference Sheet #25a
Station XV

X-ray

I. Obtain the following materials:

X-rays from doctor or hospital showing different kinds of breaks or growths
Enough copies of Activity Sheet #23 for each student to have one or more copies
Clothespins, clips or tape
Copies of Activity Sheet #7c
Sign - labeled: "X-RAY DEPARTMENT - STATION XV"
Enlarged copy of the students' instructions (Reference Sheet #25b)
String, wire

II. Set up the station.

A. Place wire or string close to a light or a window and attach X-rays with clip or clothespins. (X-rays may be taped to window)

B. Number the X-rays.

C. Place copies of Activity Sheet #23 near the X-rays.

D. Place extra copies of Activity Sheet #7b near the X-rays (student's should use the copies they have been using).

E. Hang up the sign "X-RAY DEPARTMENT."

F. Post the students' instructions in this area. (See Reference Sheet #25b)

III. Review student instructions for this station with the students before they begin role-playing. (See Reference Sheet #23b)

IV. Explain to the students that an X-ray technician (or radiologic technologist) specializes in the use of X-rays, radium, barium and radioactive isotopes in the diagnosis and treatment of disease. X-ray technicians work under the general direction of physicians. Say that the physicians are usually radiologists who specialize in the use of X-rays.

X-ray technicians have a variety of responsibilities. Some of their duties include: operating the equipment, X-ray pictures of patients, operating special X-ray equipment to treat certain diseases such as cancer, and processing X-ray film and keeping records of services performed for patients.

Reference Sheet #25b
Station XV

X-Ray
Students' Instructions

I. Study the X-rays.

  A. Do not remove the X-rays.

  B. Complete Activity Sheet #23 after you have carefully studied the X-rays.

  C. Place the completed activity sheet on your teacher's desk.

II. Refer to Activity Sheet #7c. Check (✓) the appropriate spaces to show that you have completed the activities for Station XV.

Reference Sheet #26a
Station XVI

Dietician

I. Obtain the following materials:

Copies of Activity Sheets #24a and #24b
Enlarged copy of the students' instructions (Reference Sheet #26b)
A sign labeled: "DIETICIAN - STATION XVI"

II. Explain to the students, that a patient's diet is very important. Explain that dieticians purchase food, supplies, equipment, and supervises chefs and other food service employees; and prepares various kinds of educational nutrition materials. Say that dieticians help patients plan and understand the diet prescribed for them.

III. Explain to the students that a patient's diet is very important. Stress that not only do dieticians plan meals, but they also supervise the food service workers who prepare and serve the meals. Dieticians manage the purchases, keep the accounts, and also give advice on good eating habits.

IV. Review the instructions for this station with the students. (See Reference Sheet #26b)

Reference Sheet #26b
Station XVI

Dietician
Students' Instructions

I. Study Activity Sheet #24a carefully.

II. Complete Activity Sheet #24b.

  A. Use reference materials to find a variety of foods.

  B. Give the completed activity sheet to your teacher.

III. Refer to Activity Sheet #7c. Check (✓) the appropriate spaces to show that you have completed the activities for Station XVI.

Reference Sheet #27a
Station XVII

Pharmacist

I. Obtain the following materials:

Apothecaries' measures
Metric measures
Household measures of various sizes and shapes
Medicine dropper
Water
Oil
Alcohol
Chair
Table
Enlarged copy of the students' instructions (Reference Sheet #27b)
Copies of Activity Sheets #7c, 25a, 25b, 25c, and 26
Sign labeled: "PHARMACIST - STATION XVII"

II. Explain that a pharmacist may be called a registered pharmist, a druggist, or even an apothecary. Say that he/she compounds and dispenses medicines and preparations as directed by prescriptions. Explain that he/she maintains a stock of chemicals, drugs, and other pharmaceutical supplies. Say that he/she preserves medicines, drugs, biologicals or chemicals. Explain that he/she is a pharmaceutical consultant for health practitioners and the general public. Say that pharmacists must understand the composition, use and effect of drugs and be able to test them for strength and purity.

III. Explain that pharmacists dispense drugs and medicines prescribed by doctors. Say that they also supply and advise people on the use of medicines that can be obtained with or without prescriptions. Stress that pharmacists advise physicians on the proper selection and use of medicine. Explain that pharmacists must understand the composition, use, and effect of drugs and must be able to test them for strength and purity.

IV. Have the students work in pairs or alone for this station. Note that the skills are more difficult, so some students will need more help.

V. Review the instructions for this station with the students before they begin role-playing. (See Reference Sheet #27b)

Reference Sheet #27b
Station XVII

Pharmacist
Student's Instructions

I. Note that you will be using your math and observational skills as you complete the activities for this unit.

II. Study carefully Activity Sheets #25a, 25b, 25c, and 26 before you begin.

  A. Be certain you have all the necessary equipment and materials.

  B. Be certain you understand the instructions.

III. Study Activity Sheet #25a carefully. Complete Activity Sheets #25b and #25c.

IV. Read Activity Sheet #26 carefully.

  A. Remember a pharmacist must be very accurate.

  B. Do the experiments listed, and answer the questions.

V. Give the completed activity sheets to your teacher.

VI. Clean up the area.

  A. Put the material and equipment back in their proper places.

  B. Wipe up all the spills.

VII. Refer to Activity Sheet #7c. Check (✓) the appropriate spaces to show that you have completed the activities for Station XVII.

Reference Sheet #28a
Station XVIII

Housekeeping Department

I. Obtain the following materials:

Many very small boxes
Rags
Sponges
Bucket (for water)
Cleaning products
Tape
Disinfectant
Large wastepaper basket
Soap
Erasers
Enlarged copy of the students' instructions (Reference Sheet #28b)
Copies of Reference Sheet #28b

II. Explain that the housekeeping department is responsible for keeping the hospital clean. Tell the students that the housekeeper in charge of the department has a crew of porters, maids, and other workers to polish the floors and wash the windows and the walls. Stress that cleanliness is vital because infections and disease can spread from one patient to another if high standards of cleanliness are not maintained.

Explain that the laundry department is sometimes a part of the housekeeping department. Say that the laundry department must clean, sort, press, and mark all of the linens used every day in the hospital.

III. Explain to the students the importance of keeping their homes and the places they work clean. Stress how it is everyone's job to keep things clean and neat. Stress that the people who clean hospitals are doing a very important job.

IV. Review the instructions with the students.

Reference Sheet #28b
Station XVIII

Housekeeping Department
Students' Instructions

I. Clean your desk by doing the following:

  A. Remove all the items from your desk.

    1. Sort out the wastepaper and trash, and put it into the wastepaper basket.

    2. Return all borrowed items.

    3. Take home or throw away any items that are not needed.

    4. Arrange all small loose items in a box that will not take up too much space in your desk.

    5. Brush loose particles out into the wastebasket.

  B. Repair your books.

    1. Look through your books, and tape any tears that you find.

    2. Erase all marks you can find in your books.

  C. Wash your desk.

    1. Wipe your desk with a damp cloth.

    2. Use a cleaner (not an abrasive) to clean your desk and chair all over.

    3. Scrape off any gum, glue, or other built-up material.

    4. Wipe the inside of your desk and your desk top with a disinfectant.

  D. Arrange all items in your desk so they are easy to reach.

II. Return all cleaning items to the Housekeeping Department. (Be certain that all the lids are on firmly, that the rags and sponges have been cleaned, and that all of the items are replaced neatly.

III. Refer to Activity Sheet #7c. Place a check (✓) in the appropriate spaces to show that the activities for this station have been completed.

Reference Sheet #29a
Station XIX

Laundry Department

I. Obtain the following materials:

Four (4) types of laundry soap
Eye dropper
Four (4) small spoons
Paper towels
Four (4) small bowls or paper cups
Black magic marker
Water
Large Bucket
Enlarged copy of the students' instructions (Reference Sheet #29b)
Cup of oil
Copies of Activity Sheet #27
Table and chair
Sign labeled: "LAUNDRY DEPARTMENT - STATION XIX"

II. Set up the station.

A. Place the table and chair in a designated area.

B. Place the bowls or paper cups, the spoon, the magic marker, the eye droppers, and Activity Sheet #27 on the table.

C. Place the container of water on the table.

D. Place the large bucket under the table.

E. Mark the laundry soaps, "A," "B," "C," and "D."

F. Hang a copy of the students' instructions (Reference Sheet #29b) in this area.

G. Post the sign, "LAUNDRY DEPARTMENT - STATION XIX."

III. Explain to the students that laundry workers do not do these types of activities, but the person in charge of the laundry department must choose good cleaning products.

IV. Review the instructions with the students.

Reference Sheet #29b
Station XIX

Laundry Department
Students' Instructions

I. Read the instructions carefully.

II. Label the four (4) cups or bowls "A," "B," "C," and "D."

  A. Fill each cup or bowl half full of water.

    1. Pour a spoonful of laundry soap from bottle "A" into cup "A."

    2. Pour a spoonful of laundry soap from bottle "B" into cup "B."

    3. Pour a spoonful of laundry soap from bottle "C" into cup "C."

    4. Pour a spoonful of laundry soap from bottle "D" into cup "D."

  B. Fill the eye dropper with oil.

  C. Quickly squeeze one (1) drop of oil into each cup.

  D. Observe what happens.

  E. Record your observations on Activity Sheet #27.

III. Give the completed Activity Sheet #27 to your teacher.

IV. Clean up the area.

  A. Pour the water into the large bucket.

  B. Wipe up any spills.

  C. Close the lids on the bottles.

V. Refer to Activity Sheet #7c. Place a check (✓) in the appropriate spaces to show that the activities for this station have been completed.

Reference Sheet #30a
Station XX

Engineering

I. Obtain the following materials:

A roll of bell wire (thin, copper wire insulated with copper, rubber, or plastic)
Spools
Pencil with an eraser tip
Small sewing needle
Paper clips
Small paper or aluminum dish
Two (2) or three (3) dry cells
Two (2) or three (3) large nails
Small knife
Sandpaper
Wire cutters
Pliers
Miniature socket and bulb
Door bell
Push or bell button
Small electric motor
Switch
A box to hold the above items
Table and chair
Sign labeled: "ELECTRICAL ENGINEER - STATION XX"
Enlarged copy of the students' instructions (Reference Sheet #30b)
Activity Sheets #7c and #28

II. Set up the station.

A. Place the table and the chair in a designated area.

B. Place the box of tools and Activity Sheet #28 on the table.

C. Hang up the sign, "ELECTRICAL ENGINEER - STATION XX," in this area.

D. Post a copy of the students' instructions (Reference Sheet #30b) in this area.

III. Explain to the students that workers in this department of the hospital must keep all of the equipment running. Say that they make repairs, change light bulbs, add lights where they are needed, and keep the heating plant operating. Stress that they must be alert, must know the principles of electricity, and must respect electricity. Tell the students that they will have the opportunity to use their scientific skills as they complete the activities for Station XX.

IV. Review the instructions with the students.

Reference Sheet #30b
Station XX

Electrical Engineering
Students' Instructions

I. Note that you may work alone or with a partner at this station.

II. Do some research to find out about the principles of electricity before you begin. (Look in the encyclopedia under headings such as "Electricity," "Electric current," and "Circuit.")

III. Study Activity Sheet #28.

   A. Conduct some experiments.

   B. Complete Activity Sheet #28.

   C. Give the completed Activity Sheet to your teacher.

   D. Put the equipment back into the box. Do not leave any wires connected.

IV. Refer to Activity Sheet #7c. Place a check (✓) in the appropriate spaces to show that the activities for this station have been completed.

Reference Sheet #32
*Other Medical Workers

Inhalation Therapists

Explain that these workers set up and operate various types of oxygen equipment; i.e., iron lungs, resuscitators, oxygen tents, and incubators to administer oxygen and other gases to patients. Stress that they observe gauges and turn valves to regulate the temperature and flow of gas. Explain that they must keep careful records of services they render to patients.

Medical Technologists

Explain that these workers perform microscopic, chemical, and bacteriologic tests in medical laboratories for use in detection, diagnosis and treatment of disease. Stress that they work under the direction of pathologists or other specialists in the biological sciences. Explain that they run tests on such body material as blood, pus, urine, and tissue directly from patients. Say that they cultivate, isolate, and identify pathogenic bacteria, parasites, and other micro-organisms. Explain that they cut, stain, and mount tissue sections for study by pathologists. Tell the students that a medical technologist performs many other tasks such as performing blood tests and tranfusions; studying the morphology of blood; preparing vaccines and serums; grouping or typing blood and cross-matching.

Medical-Record Librarians

Explain that these workers compiles and maintains medical records of clinic and hospital patients. Stress that they review clinical records for completeness and contact medical personnel to obtain missing data. Say that they compile statistics, such as reports on admissions, deaths, births, discharges, and tranfusions. Explain that their work also includes such tasks as coding, indexing, and filing records of diseases, diagnosis, and treatment.

Occupational Therapists

Explain that these workers plan, organize, and participate in medically oriented occupational programs in hospitals to rehabilitate patients who are mentally or physically ill. Say that they utilize manual and creative arts, educational, recreational, and social activities, prevocational evaluations, and training in every day activities.

Physical Therapists

Explain that these workers treat patients with disorders, disabilities, and injuries to relieve pain, develop or restore function, and maintain maximum performance, using physical means, such as massage, heat, water, exercise, light, and electricity as prescribed by physicians. Explain that some of their responsibilities are: making diagnostic and prognostic nerve, joint, muscle, and functional ability tests; directing patients in the use of wheelchairs, canes, cruthes, braces, and orthotic and prosthetic devices; and training and aiding patients in active and passive exercises.

Social Workers

Explain that these workers aid patients and their families with personal and environmental difficulties. Stress that they help the patients and their families accept and follow medical recommendations and provide services planned to restore the patients to their optimum helath and social adjustments within their capicity.

*Adapted from: Dictionary of Occupational Titles, Volume 1, Third Edition, U.S. Department of Labor, 1965.

Activity Sheet #1

Health

Name ______________________

Date ______________________

For the next few weeks you will be studying about hospital workers and first aid techniques. Your teacher will set up "Stations" in the room. These "stations" will include detailed instructions, materials, and equipment. You will be asked to work independently or with a partner. You will keep a record of your progress. As you complete each station, compare your check sheet with your teacher's records.

For STATION I, you are to learn first aid techniques and know when to use them.

STATION I

Name ______________________

Date ______________________

Place a check (✓) in the spaces below as you demonstrate that you know how to give first aid in the following situations.

___ stoppage of breathing

___ heart attack

___ excessive bleeding

___ burns

___ heat exhaustion

___ frost bite

___ broken bones

___ choking

___ poisoning

___ shock

___ heat stroke

___ drug overdose

___ cold exposure

Activity Sheet #2

Health

Name______________________________

Date______________________________

Match the first aid procedure that would be the most nearly correct in each of the following situations.

1. _____Heavy bleeding from the wrist
2. _____First degree burns on the hands
3. _____Heart attack
4. _____Poisoning
5. _____Near drowning
6. _____Choking

A. Quickly immerse area in cold water.

B. Give the victim lots of milk or water and call for help.

C. Help the victim to a sitting position, call for help, and give artificial respiration.

D. Apply pressure to the wound.

E. Remove foreign matter from the victim's mouth, and give mouth-to-mouth resuscitation.

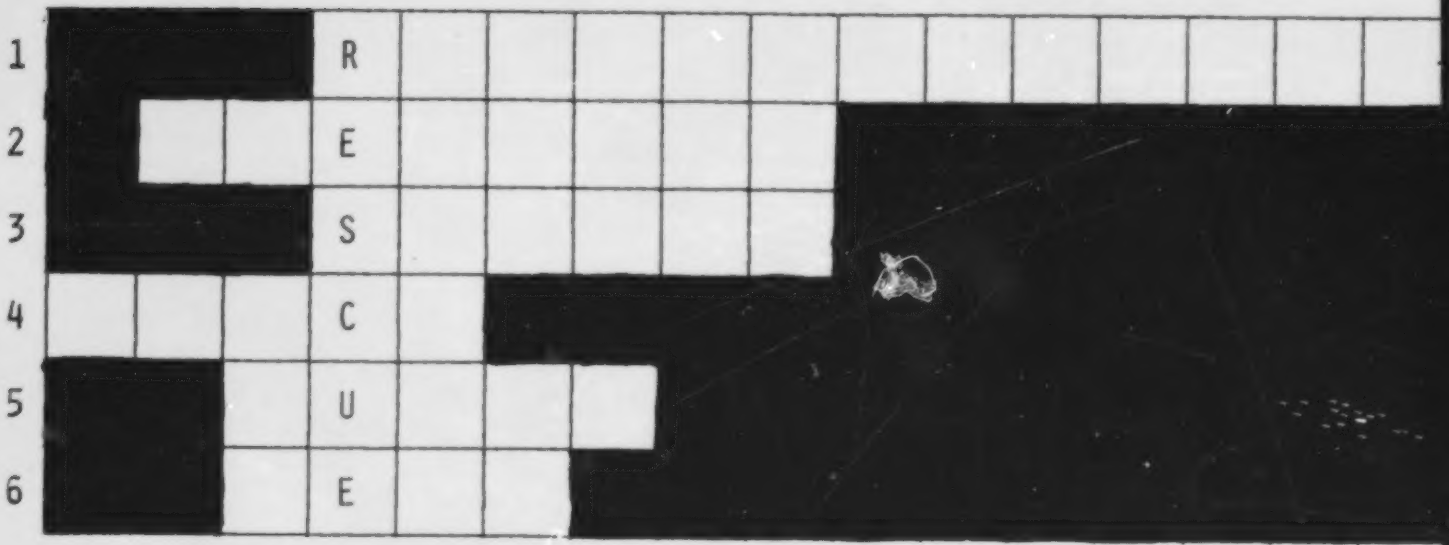
F. Raise the victim's arms above his/her head. Give a bear-hug and artificial respiration, if necessary.

Activity Sheet #3

Health
Reading

Name__________________________

Date__________________________



1. If a person can't breathe, you may need to give mouth-to-mouth __________.

2. To stop bleeding, apply __________ to the wound.

3. Use a __________ to support and protect the wounded area.

4. Cold, clammy, pale skin; rapid, faint pulse; quick, irregular breathing; and weakness with nausea may be signs of __________.

5. Mild __________ may be treated by immersing in cold water.

6. If you learn first aid techniques, you may be able to _________ others.

Activity Sheet #4

Reading

Name______________________________

Date______________________________

Draw a line from each word to its synonym.

1.	resuscitate	breathing
2.	wound	break
3.	puncture	smother
4.	fracture	revive
5.	respiration	hole
6.	suffocate	injury

Activity Sheet #5a
Medical Record

Penmanship
Reading

Dr. ______________________________

Date ______________________________

PART I - PERSONAL DATA

Patient's Name ______________________________
LAST FIRST MIDDLE

Address ______________________________

City ____________________ State ____________________

Phone Number ____________________ Sex _____ Birthdate ____________________

Place of employment (or school) ______________________________

Father's Name ______________________________
LAST FIRST

Mother's Name ______________________________
LAST FIRST

Parents' Place of Work ______________________________
FATHER

____
MOTHER

With what company are you insured ______________________________

PART II - MEDICAL HISTORY

Do you wear glasses? _____ Do you wear a hearing aid? _____

Do you now have, or have you ever had, any of these conditions or illnesses? Check (✓)

_____ Fainting
_____ Diabetes
_____ Whooping Cough
_____ Polio
_____ Epilepsy
_____ Allergies
_____ Measles
_____ Smallpox
_____ Headaches
_____ Dizziness
_____ Chickenpox
_____ T.B.
_____ Other ______________________________

Have you ever had an operation? _____ If so, for what? ____________________

____

Are you allergic to any medication? _____ If so, which one(s) ____________________

____

Activity Sheet #5b

Pennmanship
Reading

Name ______________________________

Date ______________________________

Patient ______________________________

Part III Physical Statistics

A. Height ______ B. Weight ______

Part IV Observations of head & face

____

____

Part V Eyes

A. Vision Test

1. With glasses ______ left eye ______ right eye ______
2. Without glasses ______ left eye ______ right eye ______

B. Color Perception

Is the patient able to determine the colors in the test?

Test 1 YES _____ NO _____ Test 2 YES _____ NO _____

C. Eyes (describe) ______________________________

____

Part VI Ears

A. Hearing Tests - Is the patient able to determine sound?

1. Right Ear: YES _____ NO _____
2. Left Ear: YES _____ NO _____

B. Ears (describe) ______________________________

____

Activity Sheet #5c

Name________________________

Date________________________

Patient________________________

Part VII Describe each of the following:

A. Throat________________________

B. Nose________________________

C. Lips________________________

D. Breath________________________

E. Teeth________________________

F. Mouth & Gums________________________

G. Tongue________________________

Part VIII Vital Signs

A. Temperature__________

B. Pulse__________

C. Pulse (after running in place)__________

D. Respiration__________

E. Respiration (after running in place)__________

F. Blood Pressure__________

Part IX Examination of Heart, Lungs, and Reflexes

A. Heart (describe)________________________

____

B. Lungs (describe)________________________

____

C. Reflexes (describe) Yes_____ No_____

Activity Sheet #5d

Pennmanship
Language Arts

Name ______________________________

Date ______________________________

Patient ______________________________

Part X Nurse's Notes

Activity Sheet #5d

Name ______________________________

Date ______________________________

Patient ______________________________

Part X Nurse's Notes

Activity Sheet #6a

Social Studies
Language Arts

Name____________________

Date____________________

Pretend that you are responsible for making recommendations for improvements and changes in your classroom. Complete the following:

---

1. Look carefully around your room. Make a list of everything that needs to be repaired, painted, or replaced, and tell why.

Needs Attention	Reason

2. Think about how the room arrangement (placement of lights, windows, shelves, etc.) could be improved. Think about other improvements that might be made (different color of paint, different floor covering, etc.). List any changes that you think would improve the classroom.

Improvements Needed	Why

Activity Sheet #6b

Social Studies
Language Arts

Name ______________________________

Date ______________________________

Pretend that you are responsible for making recommendations concerning the workers and operating procedures in your classroom. Complete the following:

---

1. List any changes in procedures that you feel might improve the operation of the classroom, and tell why.

Changes Needed	Why
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

2. List any workers whom you feel, if added to the classroom, might improve the operation of the room, and tell why.

Workers	Why
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

Activity Sheet #6c

Social Studies
Langauge Arts

Name______________________________

Date______________________________

Pretend that you are the Hospital Director or Administrator. You have listened to many recommendations made by the Administrators on your staff. Now you must consider which of these recommendations would be the best for your classroom. (Remember an Administrator or Director must make these decisions based on the limited amount of resources, time, personnel, and money available.)

---

1. List the two (2) most important items in the room that need to be repaired, painted, or replaced, and tell why.

   ____________________ ________________________________

   ____________________ ________________________________

2. List the two (2) most important changes that you feel would improve the classroom, and tell why.

   ____________________ ________________________________

   ____________________ ________________________________

3. List the two (2) most important changes in operating procedure that you feel would improve the classroom, and tell why.

   ____________________ ________________________________

   ____________________ ________________________________

4. List two (2) new workers whom you feel would be the most helpful to the classroom, and tell why.

   ____________________ ________________________________

   ____________________ ________________________________

Activity Sheet #7a

Name______________________________

Date______________________________

Place a check (✓) in the spaces below as you complete the activities for each of these stations.

STATION II

_____ Completed Part I of the patient's medical record

_____ Attached the patient's bracelet

_____ Filed the record

STATION III

_____ Completed Activity Sheet #6a

_____ Completed Activity Sheet #6b

_____ Met with the staff

_____ Completed Activity Sheet #6c

Activity Sheet #7a

Name______________________________

Date______________________________

Place a check (✓) in the spaces below as you complete the activities for each of these stations.

STATION II

_____ Completed Part I of the patient's medical record

_____ Attached the patient's bracelet

_____ Filed the record

STATION III

_____ Completed Activity Sheet #6a

_____ Completed Activity Sheet #6b

_____ Met with the staff

_____ Completed Activity Sheet #6c

Activity Sheet #7b
Professional Services Stall

Name____________________

Date____________________

Place a check (✓) in the spaces below as you complete the activities for each of these stations.

Nurses

1. Station IV

___Completed Part II of the patient's medical record

___Filed the record

2. Station V

___Height

___Weight

3. Station VI

___Vision test

___Color test

4. Station VII

___Hearing test

5. Station VIII

___Temperature (optional)

___Pulse

___Pulse after running

___Respiration

___Respiration after running

6. Station IX

___Blood pressure

7. Station X

___Injection (shot)

Doctor

8. Station XI

___Head & face

___Eyes

___Ears

___Throat

___Nose

9. Station XII

___Heart

___Lungs

___Reflexes

10. Station XIII

___Applied cast

11. Station XIV

___Cleaned a wound

___Stitched a wound

Activity Sheet #7c
Professional Services Staff

Name________________________________

Date________________________________

Place a check (✓) in the spaces below as you complete the activities for each of these stations.

1. Station IV
   Radiologist

   ___Read X-rays

   ___Recorded the findings

2. Station XVI
   Dietician

   ___Activity Sheet #25a

3. Station XVII
   Pharmacist

   ___Completed Activity Sheet #25b

   ___Completed Activity Sheet #25c

   ___Completed experiments

   ___Completed Activity Sheet #26

4. Station XVIII
   Housekeeping

   ___Completed activities

5. Station XIX
   Laundry

   ___Completed experiments

   ___Completed Activity Sheet #27

6 Station XX
   Engineering

   ___Completed experiments

   ___Completed Activity Sheet #28

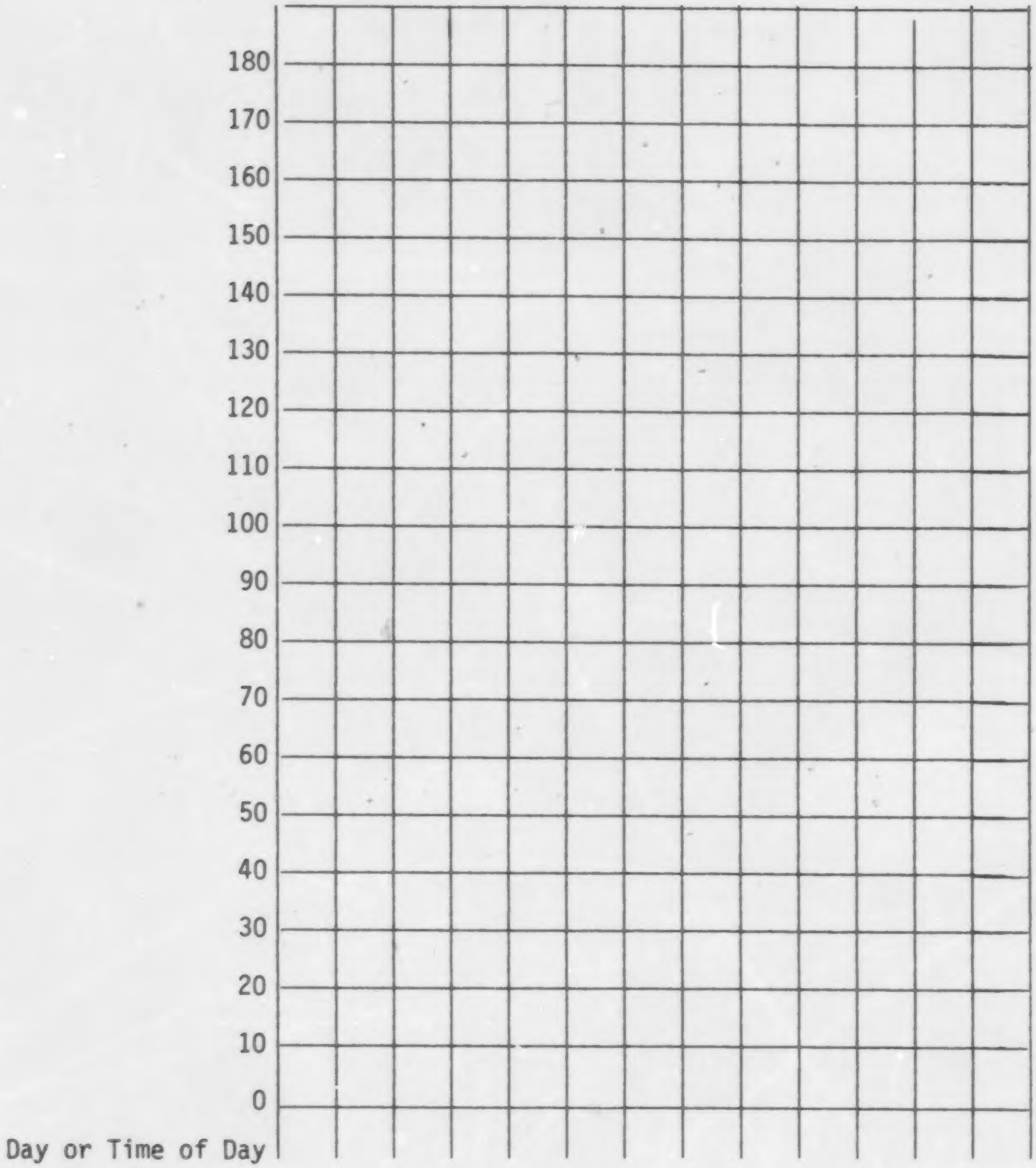
Activity Sheet #8

Graphing

Name____________________________

Date____________________________

Patient



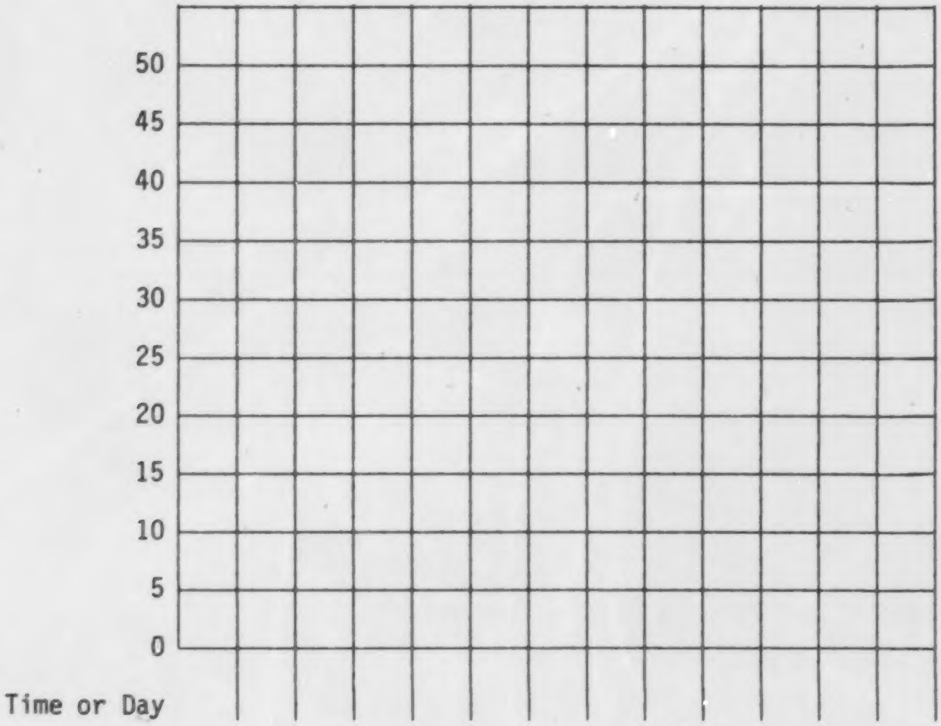
Take your own, or a classmate's, pulse rate at the same time each day for several days, or take it several times during the same day. Record these results on the line graph above.

Activity Sheet #9

Graphing

Name________________________________

Date________________________________



Take your own, or a classmate's, respiration rate at the same time each day for several days, or take it several times during the same day. Record these results on the line graph above.

Activity Sheet #10
Respiration and Pulse Rate

Math
Language Arts

Name______________________________

Date______________________________

Study the breathing and/or pulse graph (Reference Sheets #18 and #19), and answer the following questions. Circle whether you did the pulse or breathing activity in each question below.

1. Which boy had the highest (pulse rate)? ____________________

   Which boy had the lowest (pulse rate)? ____________________

   Which boy had the highest respiration rate? ____________________

   Which boy had the lowest respiration rate? ____________________

2. Which girl had the highest (pulse rate)? ____________________

   Which girl had the lowest (pulse rate)? ____________________

   Which girl had the highest respiration rate? ____________________

   Which girl had the lowest respiration rate? ____________________

3. What is the average pulse rate for the entire class? ________________

4. What is the average respiration rate for the entire class? ____________

153

Activity Sheet #11

Math
Language Arts

Name______________________________

Date______________________________

Look at Reference Sheet #12

1. What is the total combined weight of all the boys in your room?

____

2. Divide the total combined weight of all the boys by the number of boys in your room. This will tell you that the average weight for a boy in your room is.

____

3. What is the total combined weight of all the girls in your room?

____

4. Divide the total combined weight of all the girls in your room by the number of girls in your room. This will tell you that the average weight for a girl in your room is:

____

5. What is the average height of all the boys in your room?

____

6. What is the average height of all the girls in your room?

____

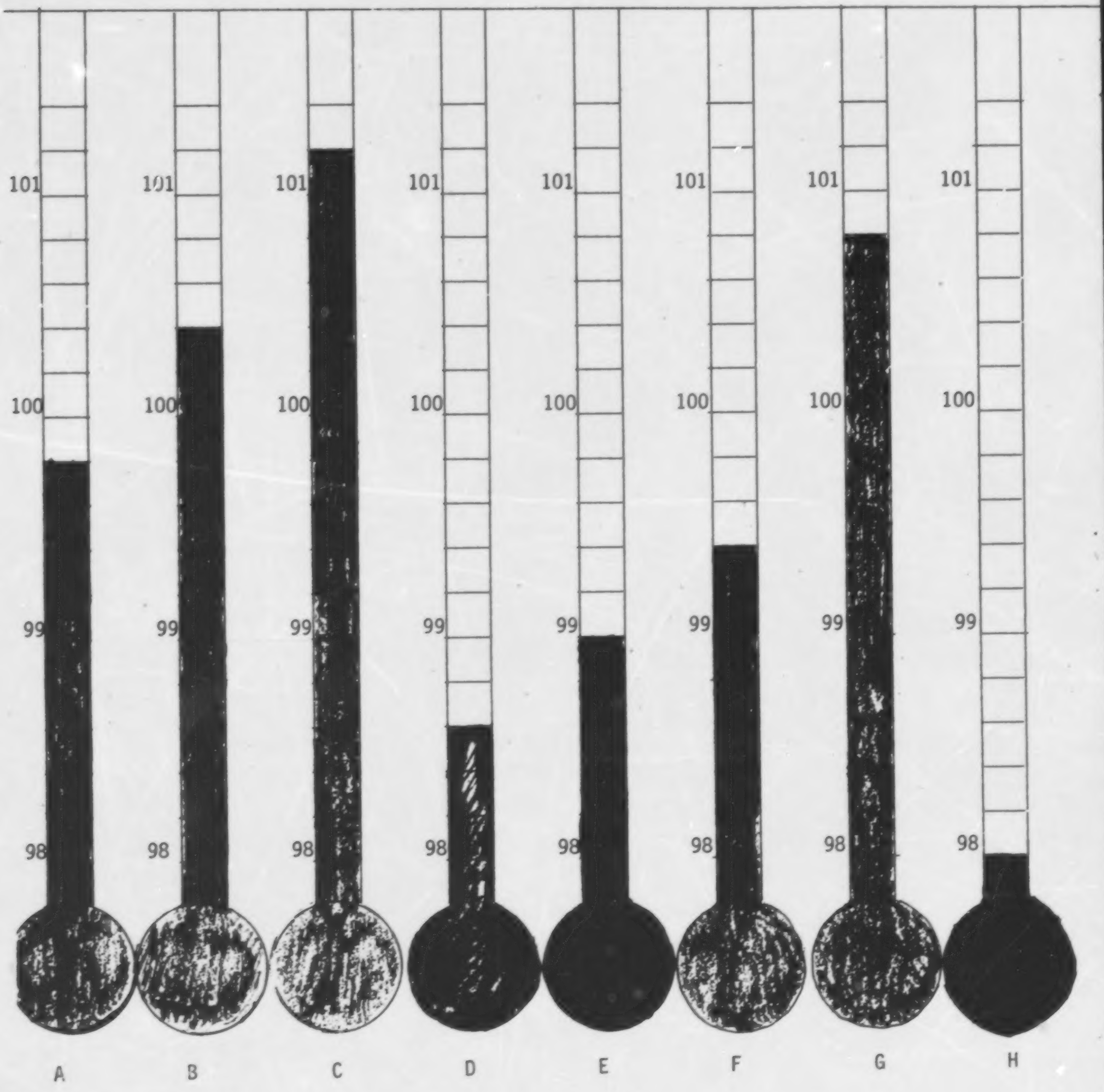
7. Is your height just about average?______________

8. Is your weight just about average?______________

Activity Sheet #12a
Thermometer

Name________________________

Date________________________


101
100
99
98
A
B
C
D
E
F
G
H

_____ _____ _____ _____ _____ _____ _____ _____

Activity Sheet #12b
Thermometer

Math
Language Arts

Name_______________

Date_______________

1. What is the temperature reading of each of the thermometers? (A has been recorded for you.)

A 99.8 E ______

B ______ F ______

C ______ G ______

D ______ H ______

2. Thermometer "B" shows the patient's temperature in the morning, and thermometer "D" shows the patient's temperature that night. How much has the patient's temperature decreased?

____

Do you think the patient might be feeling better or worse?

____

3. Which thermometer shows a normal temperature? ______________

4. Which thermometers show a temperature considered above normal? ______

5. Which thermometer shows a temperature that is considered below normal?

____

Activity Sheet #13a

Language Arts

Name____________________

Date____________________

Here are some standard abbreviations for medical terms.

Abbreviation	Definition	Abbreviation	Definition
*	birth	ss	half
+	death	stat.	immediately
♂ or □	male	S.V.R.	alcohol
♀ or O	female	T	temperature
a.c.	before meals	t.i.d.	three times a day
A	admitted	tn	tension
A.M.	morning	T.P.R.	temperature, pulse rate, & respiration
aq	water		
		I.V.	intravenous
b.i.d. 2xd	twice a day	lab	laboratory
bol	pill	lb	pound
B.P.	blood pressure	liq.	liquid
$\bar{c}$	with	L.L.Q.	left lower quadrant
cc	cubic centimeters	M or M	mix
c/o	complained of	m. et. n.	morning and night
dil	dilute	noct.	night
Dx	diagnosis	O.B.	obstetrics
h	hour	o.d.	everyday
Hx	history	O.D.	right eye
H.S.	at bedtime	o.h. g.d.	every hour
R_x	take	os	mouth
R.L.Q.	right lower quadrant	O.S.	left eye
s.s.	soap solution	O.U.	in each eye
s+s	signs & symptoms	P	pulse
s.o.s	if necessary	p.c.	after meals
p.o.	by mouth	p.r.n.	whenever necessary
Px	past history	q.d.	everyday
q.2.h.	every 2 hours	q.i.d. 4xd	four times a day
q.p.	as much as you please		

Activity Sheet #13b

Language Arts

Name ______________________________

Date ______________________________

Medical workers use this language. Can you rewrite these messages?

1. ♀ A at 4:00 p.m. She c/o pain in the R.L.Q.

____

____

2. R_x 2 bol. $\bar{c}$ aq. a.c., t.i.d.

____

____

3. Can you write a message using medical terms? Try it.

____

____

Activity Sheet #14a

Science
Health

Name________________

Date________________

Here are the major systems of the body:

1. The skeletal - muscular system-consists of 206 bones and hundreds of muscles that support and protect the internal organs and help the body move.
2. The digestive system - prepares food so the cells can use it, absorbs the food into the body, and eliminates any material that cannot be absorbed.
3. The urinary system - removes urea and other waste products from the body in liquid urine.
4. The respiratory system - brings air into the body and removes carbon dioxide through the process of breathing.
5. The circulatory system - carries blood through the body.
6. The nervous system - regulates the activities of all the other systems.
7. The reproductive system - produces new individuals.

Some physicians or surgeons specialize in a specific area. Match the areas below to the body system with which they are associated.

_____ obstetrics

_____ neurology

_____ urology

_____ gastroenterology

_____ orthopedics

_____ hematology

Activity Sheet #14b

Language Arts

Name______________________________

Date______________________________

Match each of these medical practitioners with the most accurate description. (Use each answer only once.)

1. Chiropractor
2. Optometrist
3. Osteopath
4. Physician
5. Podiatrist
6. Veterinarian

_____treats and controls diseases and injuries among animals

_____diagnoses and treats foot diseases and deformities

_____treats patients by manipulating parts of the body, especially the spinal cord, but does not use drugs or surgery

_____examines peoples eyes for vision problems and diseases

_____treats patients by manipulating muscles and bones, and uses surgery or durgs

_____diagnoses diseases, and treats people who are suffering from injury or disease

Activity Sheet #15

Language Arts
Social Studies

Name_____________________________

Date_____________________________

Below is a list of a few of the workers whose jobs are interdependent on the physicians. Match each worker with the most accurate description of one of his/her responsibilities.

A. Nurse
B. Pharmacist
C. Health Officer
D. Lab Technician
E. Dietician
F. Inhalation Therapist
G. Electrician
H. Housekeeper

_____sets up and operates different types of oxygen equipment

_____makes sure that the hospital is kept clean

_____enforces laws that protect the public health

_____follows the doctors orders in giving direct care to the patients

_____plans menus for patients

_____examines the patients' blood

_____provides lighting in emergency situations

_____prepares medicine

Activity Sheet #16a
Observation

Use a dictionary to look up the meaning of words as you read the following information. Observe this list of some of the things a doctor looks for as he/she examines a patient. Note that as the doctor examines the patient, he/she does not always write out complete sentences but chooses adjectives that describe a condition.

Head and Face:	Size, position, and shape, especially if there is variation from normal; skin coloring (cyanotic, jaundiced, pale, flushed); presence of abrasions, swellings, lacerations, or contusions; muscle spasms or paralysis; ease of movement of the head; facial expression (anxiety, fear, pain, worry, fatigue, or a lack of any expression indicating an attitude or the presence of a brain lesion); etc.
The Eyes:	Abnormalities (puffiness, sensitivity to light, presence of dark circles beneath the eyes); vision (blurring of vision or lack of vision); movements of the eyeball and its appearance (sunken or protruding); eye lids (drooping, reddened, swollen, or showing tremors); condition of the pupils (dilated or contracted and equal or unequal accommodation; degree of lacrimation or of discharge, if present; color of the sclera and the conjunctive); etc.
The Ears:	Abnormalities (tenderness, pain, or swelling in or about the ears); compalints of tinnitus (ringing in the ears); presence of discharge from the ears; etc.
The Nose:	Any abnormality of shape (deformed, enlarged, edematous) or coloring (reddened); difficulty in breathing; impairment in sense of smell; etc.
The Lips:	Coloring (pale, cyanotic); appearance (cracked, dry, presence of lesions, edematous); etc.
The Breath:	Odor (ammoniacal, sweet, fetid, sour, alcoholie--characteristic of certain disease conditions); type of respiration; etc.
The Teeth:	Loose, in good condition, decayed, showing lack of care; presence of partial or complete denture; etc.
Mouth & Gums:	Presence of ulceration, sores, edema, infection, bleeding; color (pale, highly inflamed); any unusual abnormality or marking; etc.
The Tongue:	Color (pale or normal, gray or brown with furred appearance coated); presence of patches, fissures, scars; etc.
The Throat:	Presence of swelling, redness, ulceration, discharge; difficulty in swallowing, hoarseness; presence of tonsils and their condition (diseased or healthy); etc.
The Neck:	Abnormalities (growths, swellings); restricted movement; etc.

Activity Sheet #16b
Observation
(Continued)

Be sure you understand the meaning of all the words before you begin making your observations. When filling in your patient's medical record, keep your description short. See the example below.

Eye: clear

Ears: waxy discharge, yellowish

Throat: tonsils red

Nose: running - clear discharge

Lips: small sore

Breath: normal

Teeth: show care

Mouth and Gums: white mark on right side

Tongue: coated

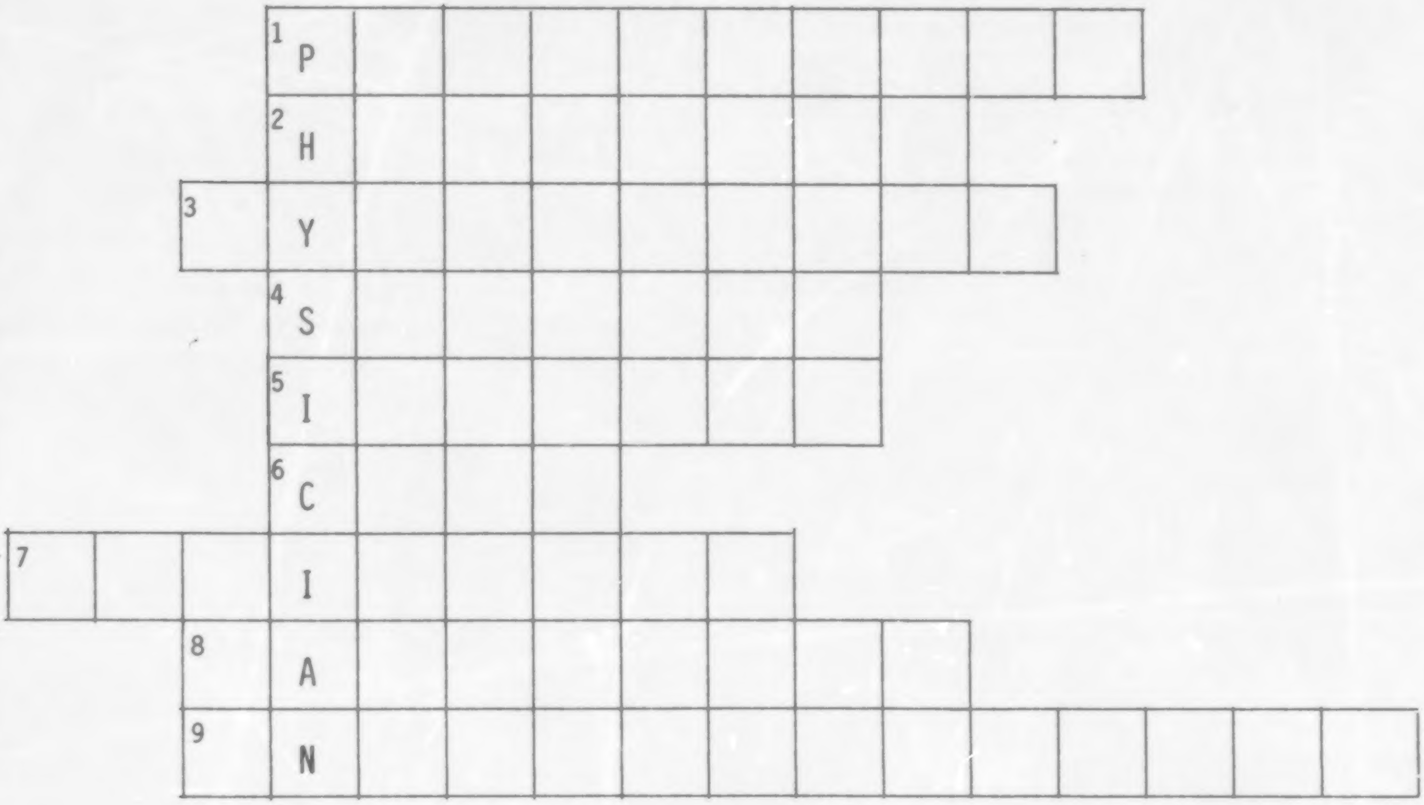
Activity Sheet #17

Language Arts

Name__________________________________

Date__________________________________

Observe that the following is not an easy puzzle. Search carefully to find the answers. Use a good dictionary to find the meaning of words with which you are unfamiliar. Note that "physician" and "medicine" are two subject titles that may be useful if you use an encyclopedia. Watch the suffixes. Refer to the "M" World Book Encyclopedia (Medicine).



1. Treatment of childrens' diseases.
2. A place where sick or injured people are given treatment.
3. Treatment of diseases peculiar to women.
4. An operation performed by a surgeon.
5. The act of breathing in.
6. Physicians should give good_____to their patients.
7. The science dealing with X-rays.
8. The science that deals with the nature or origin of disease.
9. The science of the administering or the giving of pain killing drugs.

Activity Sheet #18

Language Arts

Name________________________

Date________________________

A	S	O	U	G	R	T	M	V	I	C	A	P	P	H	A	S	J	T	F
Z	N	Y	F	Q	R	D	E	S	O	K	W	F	B	Z	Q	R	A	B	D
B	L	A	R	E	S	I	D	E	N	T	D	O	C	T	O	R	N	G	S
K	A	C	M	J	O	H	I	V	U	B	A	C	T	E	R	I	A	I	U
C	D	H	N	A	K	D	C	J	I	I	J	G	K	A	L	F	M	U	R
A	N	A	U	K	Q	G	A	T	B	H	F	C	D	H	E	W	W	Q	G
S	U	R	G	I	C	A	L	I	N	S	T	R	U	M	E	N	T	S	E
U	B	T	L	N	M	Z	P	Y	X	N	W	F	V	G	N	Q	I	P	O
R	C	W	A	T	Q	N	R	R	O	P	E	R	A	T	I	O	N	W	N
G	V	E	R	E	E	O	A	E	B	S	M	T	F	O	U	Z	V	H	I
E	B	T	E	R	F	E	C	R	Z	D	P	H	Y	S	I	C	I	A	N
R	A	O	A	N	B	G	T	C	M	S	L	Z	K	D	J	S	A	T	F
Y	R	C	C	S	D	R	I	C	H	E	C	K	U	P	V	K	W	U	E
U	W	A	Z	A	D	U	C	T	P	O	R	P	Y	Q	B	R	I	E	C
T	X	Q	P	U	L	S	E	X	N	E	T	R	E	A	T	M	E	N	T

OPERATION

INFECT

GLARE

RESIDENT DOCTOR

PULSE

SURGERY

BACTERIA

TREATMENT

MEDICAL PRACTICE

PHYSICIAN

SURGEON

SURGICAL INSTRUMENTS

INTERN

CHART

CHECKUP

Activity Sheet #19

Name______________________________

Date______________________________

1. A physician urges his or her patients to have a complete

   ________________at least once a year.

2. During this examination the physician looks for signs of__________.
3. He or she gives______________for protection against diphteria, whooping cough, and other diseases.
4. He or she recommends a ____________________to prevent such diseases as rickets and scurvy.
5. Another name for a general practitioner is the___________________.
6. A ____________________ is a specialist who treats diseases by means of surgical operations.
7. Doctors use X-rays, blood tests, and other methods to________________ diseases.
8. The doctor listens to the patient's heart and lungs through a

   _______________________.

disease

"family doctor"

stethoscope

physical

diet

diagnose

"shots"

surgeon

Activity Sheet #20
Aptitude Questionnaire

Self-Awareness
Language Arts

Name______________________________

Date______________________________

Note that the desire to be a doctor is only the first requirement. Decide if you have these personal characteristics which are needed for a successful career as a doctor.

	Yes	No
1. Do you like to study?		
2. Are your school marks very good?		
3. Are you interested in science and mathematics?		
4. Can your parents afford to send you to college?		
5. Do you have courage?		
6. Do you have good judgment?		
7. Can you make decisions quickly?		
8. Do you get along with people?		
9. Do you have the ability to influence people for their own good.		
10. Do people easily confide in you?		
11. Do you have patience, good judgment, and common sense?		
12. Do you have intellectual curiosity?		
13. Do you have idealism?		
14. Do you have a frankness that will cause people to trust you?		
15. Do you have good health, a pleasing personality, and a sense of humor?		
16. Do you have the initiative to look up the words with which you are unfamiliar?		

Activity Sheet #21a

Science

Name______________________________

Date______________________________

Check the right answer.

1. The system that transports blood through the body is called:
   a. the vegetal system_____
   b. the circulatory system_____
   c. the endocrine system_____

2. The body organs concerned with breathing are called collectively:
   a. the inflationary system_____
   b. the pneumatic system_____
   c. the respiratory system_____

3. The humerus bone is:
   a. in the leg_____
   b. in the arm_____
   c. in the skull_____

4. A capillary is:
   a. an operation on the heart_____
   b. the smallest kind of blood vessel_____
   c. a bone in the foot_____

5. The human heart is:
   a. a gland_____
   b. a muscle_____
   c. a tube_____

6. When a doctor tells you that he will have to remove your appendix, on what part of you will he operate?
   a. the brain_____
   b. the abdomen_____
   c. the chest_____

Activity Sheet #21b

Science

Name_____________________________

Date_____________________________

7. The cells of the blood which destroy bacteria in the body are:

   a. red corpuscles_____

   b. white corpuscles_____

   c. nerves_____

8. Messages from the brain are carried to other parts of the body by the:

   a. esophagus_____

   b. spinal cord_____

   c. lateral arch_____

9. Three of these organs are part of the digestive tract. One is not. Can you name it?

   a. liver_____ b. kidney_____

   c. brain_____ d. pancrease_____

10. What is the average normal body temperature of human beings?

   a. 98.6^{0}F_____

   b. 93.4^{0}F_____

   c. 100.6^{0}F_____

11. How many bones are in the human body:

   a. 110_____

   b. 206_____

   c. 56_____

12. The body of an average man contains approximately how much blood?

   a. 5 to 6 quarts_____

   b. 2 to 3 quarts_____

   c. 9 to 10 quarts_____

13. The outer layer of skin is known as:

   a. the epidermis_____

   b. the dermis_____

   c. the shield_____

Activity Sheet #22

Language Arts

Name____________________________________

Date____________________________________

Match these workers with the description that best tells how they help the patients.

1. _____Occupational Therapist
2. _____Medical-Record Librarian
3. _____Radiologist
4. _____Social Worker
5. _____Physical Therapist
6. _____Dietician
7. _____Laboratory Technician
8. _____Pharmacist

A. keeps records on every patient

B. prepares medicine that the doctor has ordered for the patient

C. plans the menus for the patients and the staff

D. studies samples of the patient's blood and body fluids, and sends reports to the doctor in charge of the patient's treatment

E. supervises the X-ray department and interprets X-ray photographs

F. helps to train a patient to return to his/her old job, or trains him/her in new skills so that he/she may find other employment

G. trains patients who have lost the use of some portion of their bodies to they may return home and take care of themselves

H. helps patients and their families find ways to solve problems created in their homes by serious accidents or illnesses

Activity Sheet #23

Science

Name____________________

Date____________________

Study the X-rays, and then answer the following questions:

1. Number 1 is an X-ray of what part of the body?____________________

   What did you observe about this X-ray?____________________

   ____

   ____

2. Number 2 is an X-ray of what part of the body?____________________

   What did you observe about this X-ray?____________________

   ____

   ____

3. Number 3 is an X-ray of what part of the body?____________________

   What did you observe about this X-ray?____________________

   ____

   ____

Activity Sheet #24a
*Basic 4 Food Chart

Health
Science

Name______________________________

Date______________________________

Your daily diet should include food from each of these food groups. The required daily amount has been identified for each group below.

MEAT GROUP

Eat at least two (2) servings of this group per day. Meats, fish, poultry, eggs, etc., are the principal sources of protein for growth, muscle building, and repair of tissues.

Dry beans or peas, peanut butter, and nuts are also high in protein.

Foods in this group contribute good quantities of iron and B vitamins such as niacin, riboflavin and thiamin.

BREAD-CEREAL GROUP

Eat at least four (4) servings per day of whole grain, enriched, or restored grain products. These include bread and other baked goods, macaroni, noodles, rice, cereal, cornmeal, etc. All are excellent sources of food energy (calories); iron for blood-building; and B vitamins for healthy nerves and skin, normal digestion, and appetite.

(A serving is one (1) slice enriched bread, one (1) oz. ready-to-eat cereal, 1/2 to 3/4 cup cooked enriched macaroni, grits, rice, or cereal.)

VEGETABLE-FRUIT GROUP

Eat at least four (4) servings per day of this group. Citrus fruits, tomatoes, strawberries, cabbage, broccoli, cantaloupe, etc., give Vitamin C which is necessary for healthy gums, blood vessels, and body tissues. This vitamin helps the body to resist infection and aids in healing.

Carrots, winter squash, broccoli, spinach, cantaloupe, apricots, sweet potatoes, etc., give Vitamin A which is essential for normal vision and healthy skin.

MILK GROUP

Drink three to four (3-4) cups of milk per day. Adults need two (2) or more cups.

Besides milk for drinking, this group includes cheese, ice cream, yogurt, and foods in which milk is a main ingredient (puddings, cream, soups, etc.)

Without milk it is difficult to get the calcium and phosphorus necessary for healthy bones and teeth. Milk also contains valuable protein, riboflavin, Vitamin A, and if fortified, Vitamin D which helps the body utilize calcium.

Everything you eat is not included in the "Basic 4 Food Groups." Butter and margarine contribute Vitamin A. Other foods such as fats, candies, desserts, sugar, and snacks contribute energy, variety, and should not be left out.

*As identified by the Kansas Wheat Commission.

Activity Sheet #24b

Health
Science

Name____________________

Date____________________

Plan a well balance diet. Design the menus for three (3) meals (breakfast, lunch, and dinner). Study the basic food chart. Be certain you have included the daily requirements.

BREAKFAST ____________________

____

____

____

____

LUNCH ____________________

____

____

____

____

DINNER ____________________

____

____

____

____

Activity Sheet #25a

Math

Name______________________________

Date______________________________

Study the table:

Table of Weight

20 grains (gr.) = 1 scruple (℈)

3 scruples or 60 grains = 1 dram (ʒ)

8 drams or 480 grains = 1 ounce (℥)

Table of Fluid Measure

60 minims (♏) = 1 fluidram (fʒ)

8 fluidrams or 480 minims = 1 fluid ounce (fʒ)

16 fluid ounces = 1 pint (pt. or O)

2 pints = 1 quart (qt.)

4 quarts = 1 gallon (C)

A minim is the smallest fluid of measure. A minim is equal to a drop of water or water solution, or 2 drops of an alcoholic solution, or 3 drops of ether, etc.

A grain is the smallest unit of weight.

Quantity is expressed in Roman numerals which are place after the symbols; i.e., three drams is ʒiii, five drams is ʒv. Fractions are expressed in Arabic numerals 1/4, 1/8, and 1/2; i.e., gra. 1/2. The symbol "ss" may be used for 1/2' thus 3 and one-half grains is gr. iiiss.

Activity Sheet #25b

Math

Name ______________________

Date ______________________

Study the chart shown on Activity Sheet #25a. Note that a doctor uses symbols when he/she writes a prescription and that a pharmacist must be able to understand the doctor's direcitons.

Study these symbols, and rewrite them as you would read them. (The first has been done for you.)

1. ʒss one half ounce
2. ʒiiss ______________________
3. gr. xxx ______________________
4. 0 vi ______________________

Activity Sheet #25b

Math

Name ______________________

Date ______________________

Study the chart shown on Activity Sheet #25a. Note that a doctor uses symbols when he/she writes a prescription and that a pharmacist must be able to understand the doctor's directions.

Study these symbols, and rewirte them as you would read them. (The first has been done for you.)

1. ʒss one half ounce
2. ʒiiss ______________________
3. gr. xxx ______________________
4. 0 vi ______________________

Activity Sheet #25c

Math

Name________________________________

Date________________________________

Write the following as they should be written in a prescription.

1. 16 minims______________
2. 4 fluidrams______________
3. 1 pint______________
4. 3½ drams______________
5. 15 grains______________
6. 1/2 ounce______________

Activity Sheet #25c

Math

Name________________________________

Date________________________________

Write the following as they should be written in a prescription.

1. 16 minims______________
2. 4 fluidrams______________
3. 1 pint______________
4. 3½ drams______________
5. 15 grains______________
6. 1/2 ounce______________

Activity Sheet #26

Science

Name____________________________

Date____________________________

Note that the tools used by a pharmacist must be very accurate. Do these experiments to determine the accuracy of a variety of measuring tools that you might find around your home.

1. Look at the various cups. Do they look like they would hold the same amount?____
2. Fill one. Pour the content from this cup into each of the other cups. How do they compare?

   ____
3. Compare the teaspoons in the same way. Are they all equal?____________
4. With a medicine dropper, drop 20 drops of water into a minim glass.
   a. How many minims are there?________________
   b. Pour water from a cup into the minim glass. Which way do you think is the most accurate?________________
5. Drop 20 drops of alcohol into the minim glass. Is 20 drops of alcohol equal in capacity to 20 drops of water?______________________
6. Drop 20 drops of oil into the minim glass.
   a. Is 20 drops of oil equal in capacity to 20 drops of water?__________
   b. Is 20 drops of oil equal in capacity to 20 drops of alcohol?________
   c. Which is the largest amount: 20 drops of water, 20 drops of alcohol, or 20 drops of oil?

      ____

Activity Sheet #27

Science

Name ____________________

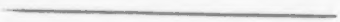
Date ____________________

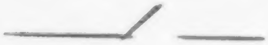
DETERGENT	A	B	C	D
Which detergent started breaking up first, second third, and fourth? (Indicate 1-2-3-4.)				
About how many seconds elapsed until each droplet started breaking up?				
What are some things that you observed?				
Which detergent would you recommend?				
Write the names of the detergents.				
What were some problems you encountered while doing your experiment?				

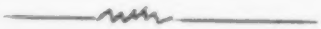
Activity Sheet #28

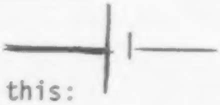
Name ____________________

Date ____________________

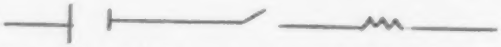
Here is the symbol for a wire. 

Here is the symbol for a switch. 

Here is the symbol for a bulb. 

Here is the symbol for a battery or dry cell. 

Drawn together they might look something like this:



1. Look at all the equipment in the box. Experminent to see if you can make the bulb light.

   A. Tell how the wires must be connected for the bulb to light.

   B. Try to draw a diagram to show how the wires are connected. Use the symbols above.

2. Experiment to see if you can make the bell ring.

   A. Describe how the wires must be connected.

3. Do some more experimenting. Tell what you have learned about electricity.

Activity Sheet #29
Housekeeping

Social Studies

Name____________________________

Date____________________________

1. Place a check (✓) if the worker did a sufficient job.
2. Place a (0) if the worker did an outstanding job.
3. Place a (-) if the worker did not complete the task or it sufficiently.

Use the spaces below to write the names of the workers whom you are to supervise. (You may be responsible for a few workers or for many workers.)

WORKERS	MON.	TUES.	WED.	THURS.	FRI.

Activity Sheet #30

Name ____________________

Date ____________________

Your teacher will display cleaning products and water. Read the labels carefully (but do not taste). Answer the following questions.

1. If you were told to clean a heavily soiled tile floor, what product or combination do you think would do the best job?

   product ____________________

   combination ____________________

2. If you were asked to wash a heavy stain from a green bedspread, what product or combination would you use?

   product ____________________

   combination ____________________

3. What would you use to remove heavy wax from a tile floor?

   product ____________________

   combination ____________________

4. What would you use to remove a heavy stain from white sheets?

   product ____________________

   combination ____________________

5. List all of the products displayed that are poisonous.

   ____

   ____

6. List those that may not be fatal if swallowed, but are harmful.

   ____

   ____

7. Are there any warnings about mixing certain products? __________

   If so, which ones? ____________________

Activity Sheet #31

Name______________________________

Date______________________________

Match each set of body parts with the correct system of the body. The first one has been done for you.

a. humerus, radius, rib

b. uterus, ovary, testis

c. stomach, mouth, pancreas

d. heart, artery, vein

e. nose, lung, trachea

f. kidney, bladder, urethra

g. bicep, deltoid, pectoralis

h. cerebrum, spinal cord, pons

1. __f__ The Urinary System removes urea and other waste products from the body in liquid urine.

2. _____ The Circulatory System carries blood through the body.

3. _____ The Skeletal System protects and supports the internal organs.

4. _____ The Muscular System helps the body move.

5. _____ The Respiratory System brings air into the body and removes carbon dioxide through the process of breathing.

6. _____ The Reproductive System produces egg cells, which when fertilized, develop into babies.

7. _____ The Digestive System prepares food so the cells can use it, absorbs the food into the body, and eliminates any material that cannot be absorbed.

8. _____ The Nervous System regulates the activities of all the other sytems.

Activity Sheet #32

Name

Date

Systems of the Body

■	■	■	1		S									■	■
■	■	■	■	2	K							■	■	■	■
■	■	■	■	3	E										
4					L			■	■	■	■	■	■	■	■
■	■	■	■	5	E						■	■	■	■	■
6					T				■	■	■	■	■	■	■
■	7				A			■	■	■	■	■	■	■	■
8					L						■	■	■	■	■

1. The____________________system includes the nose, larynx, trachea, and lungs. This system brings air into the body.
2. The____________________system consists of 206 bones that protect and support the internal organs.
3. The____________________system is necessary for the reproduction of life.
4. The____________________system helps the body move.
5. The____________________system regulates all of the other systems.
6. The____________________system prepares food so the cells can use it, and eliminates any material that cannot be absorbed.
7. The____________________system consists of the kidneys, ureters, bladder, and uretha. It removes waste products from the body in liquid urine.
8. The____________________system carries blood through the body. It includes the arteries, veins, capillaries, and the heart.

Reference Sheet #33

Answers for Activity Sheets

Activity Sheet #2

1. D
2. A
3. C
4. B
5. E
6. F

Activity Sheet #3

1. Resuscitation
2. Pressure
3. Splint
4. Shock
5. Burns
6. Help

Activity Sheet #4

1. Resuscitate - Revive
2. Wound - Injury
3. Puncture - Hole
4. Fracture - Break
5. Respiration - Breathing
6. Suffocate - Smother

Activity Sheet #12a

A. 99.8
B. 100.4
C. 101.2
D. 98.6
E. 99.0
F. 99.4
G. 100.8
H. 98.0

Activity Sheet #12b

1a. 99.8
1b. 100.4
1c. 101.2
1d. 98.6
1e. 99.0
1f. 99.4
1g. 100.8
1h. 98.0

2. 1.8 degrees
   Better
3. D
4. A, B, C, E, F, G
5. H

Activity Sheet #13b

1. Female admitted at 4:00 in the afternoon. She complained of pain in the right lower quadrant.
2. Take 2 pills with water before meals, three times a day.
3. Varies from student to student.

Activity Sheet #14a

7 obstetrics
6 neurology
3 urology
2 gastroenterology
1 orthopedics
5 hematology

Activity Sheet #14b

6 treats and controls disease and injuries among animals
5 diagnoses and treats foot disease and deformities
1 treats patients by manipulating parts of the body, especially the spinal cord, but does not use drugs or surgery
2 examines peoples eyes for vision problems and diseases
3 treats patients by manipulating muscles and bones, and uses surgery or drugs
4 diagnoses diseases and treats people who are suffering from injury or disease

Activity Sheet #15

F Sets up and operates different types of oxygen equipment
H Makes sure that the hospital is kept clean
C Enforces laws that protect the public health
A Follows the doctors orders in giving direct care to the patients
E Plans menus for patients
D Examines the patients' blood
G Provides lighting in emergency situatio
B Prepares medicine

Reference Sheet #34

Answers for Activity Sheets

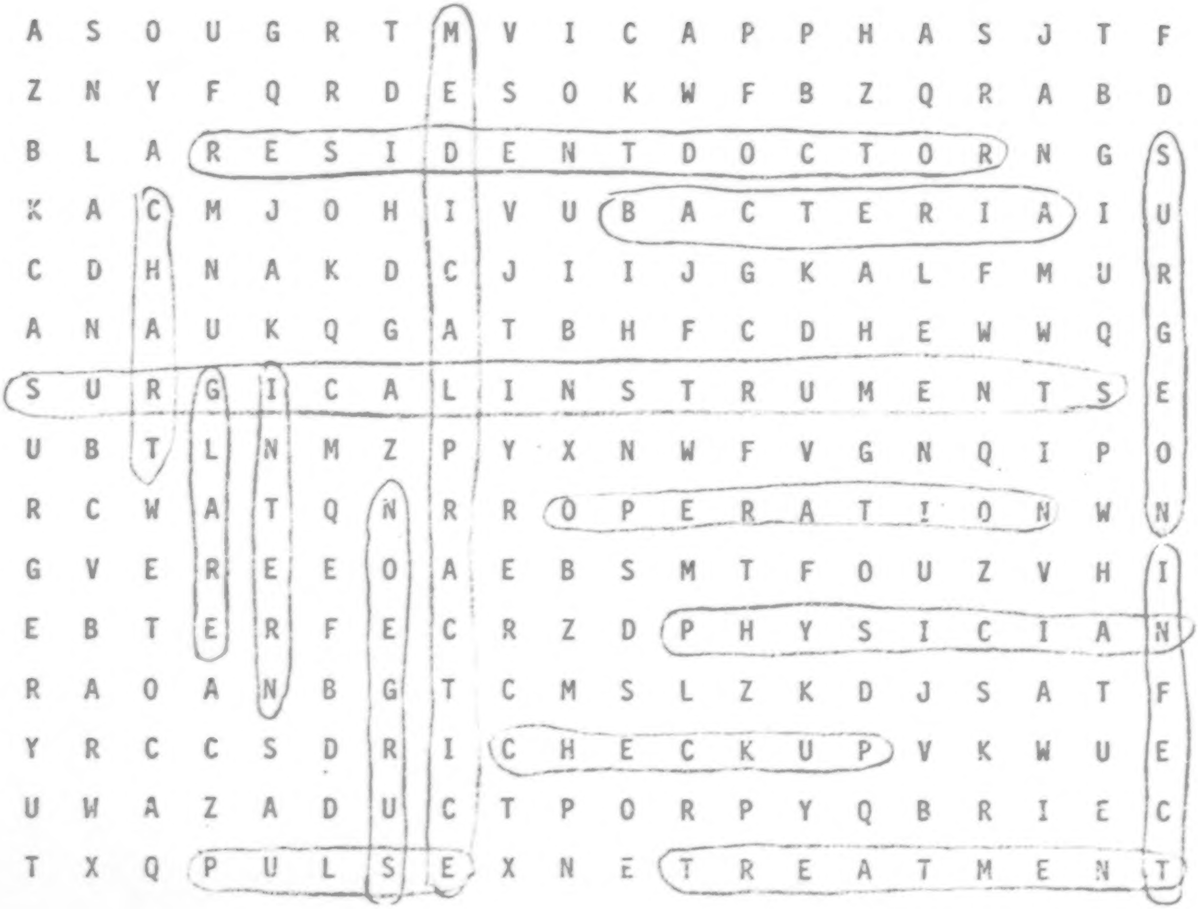
Activity Sheet #17

1. Pediatrics
2. Hospital
3. Gynecology
4. Surgery
5. Inhales
6. Care
7. Radiology
8. Pathology
9. Anesthesiology

Activity Sheet #19

1. Physical
2. Disease
3. "Shots"
4. Diet
5. "Family doctor"
6. Surgeon
7. Diagnose
8. Stethoscope

Activity Sheet #18



A	S	O	U	G	R	T	M	V	I	C	A	P	P	H	A	S	J	T	F
Z	N	Y	F	Q	R	D	E	S	O	K	W	F	B	Z	Q	R	A	B	D
B	L	A	R	E	S	I	D	E	N	T	D	O	C	T	O	R	N	G	S
K	A	C	M	J	O	H	I	V	U	B	A	C	T	E	R	I	A	I	U
C	D	H	N	A	K	D	C	J	I	I	J	G	K	A	L	F	M	U	R
A	N	A	U	K	Q	G	A	T	B	H	F	C	D	H	E	W	W	Q	G
S	U	R	G	I	C	A	L	I	N	S	T	R	U	M	E	N	T	S	E
U	B	T	L	N	M	Z	P	Y	X	N	W	F	V	G	N	Q	I	P	O
R	C	W	A	T	Q	N	R	R	O	P	E	R	A	T	I	O	N	W	N
G	V	E	R	E	E	O	A	E	B	S	M	T	F	O	U	Z	V	H	I
E	B	T	E	R	F	E	C	R	Z	D	P	H	Y	S	I	C	I	A	N
R	A	O	A	N	B	G	T	C	M	S	L	Z	K	D	J	S	A	T	F
Y	R	C	C	S	D	R	I	C	H	E	C	K	U	P	V	K	W	U	E
U	W	A	Z	A	D	U	C	T	P	O	R	P	Y	Q	B	R	I	E	C
T	X	Q	P	U	L	S	E	X	N	E	T	R	E	A	T	M	E	N	T

Reference Sheet #35

Answers for Activity Sheets

Activity Sheet #21a & b

1. b
2. c
3. b
4. b
5. b
6. b
7. b
8. b
9. c
10. a
11. b
12. a
13. a

Activity Sheet #22

1. F
2. A
3. E
4. H
5. G
6. C
7. D
8. B

Activity Sheet #25b

1. one half ounce
2. two and one half drams
3. thirty grains
4. six pints

Activity Sheet #25c

1. ♏ xvi
2. f3iv
3. Oi
4. 3iiiss
5. gr. xv
6. ℥ss

Activity Sheet #31

1. f
2. d
3. a
4. g
5. e
6. b
7. c
8. h

Activity Sheet #32

1. Respiratory
2. Skeletal
3. Reproductive
4. Muscular
5. Nervous
6. Digestive
7. Urinary
8. Circulatory

"END OF DOCUMENT"